FILE 'HOME' ENTERED AT 15:16:42 ON 26 MAR 2009

=> file medline embase biosis polymer COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.22 0.22

FULL ESTIMATED COST

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FILE 'USPATOLD' ENTERED AT 15:17:11 ON 26 MAR 2009
CA INDEXING COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 15:17:11 ON 26 MAR 2009
CA INDEXING COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE 'WSCA' ENTERED AT 15:17:11 ON 26 MAR 2009 COPYRIGHT (C) 2009 PAINT RESEARCH

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=> s cellulose (s) enzyme L1 50698 CELLULOSE (S) ENZYME

=> s l1 and glucan L2 3057 L1 AND GLUCAN

=> s 12 and (cellulase or frutofuranosidase)
L3 1684 L2 AND (CELLULASE OR FRUTOFURANOSIDASE)

=> s 13 and synthesis L4 622 L3 AND SYNTHESIS

=> s 14 and oligo?
 18 FILES SEARCHED...
L5 522 L4 AND OLIGO?

=> s 16 and (Glc or Gal) L7 31 L6 AND (GLC OR GAL)

=> dis 17 1-31 bib abs

L7 ANSWER 1 OF 31 USPATFULL on STN
AN 2008:334431 USPATFULL <<LOGINID::20090326>>

```
Alkaliphilic Bacillus Species alpha-Amylase Variants, Compositions
       Comprising alpha-Amylase Variants, And Methods of Use
       Jones, Brian E., Liedschendam, NETHERLANDS
TN
       Vroemen, Casper, Oegstgeest, NETHERLANDS
       Chang, Claudine, Mountain View, CA, UNITED STATES
       Naab, Corey, North Chili, NY, UNITED STATES
       De Nobel, Hans, Heemstede, NETHERLANDS
       Kolkman, Marc, Oegstgeest, NETHERLANDS
       Weyler, Walter, San Francisco, CA, UNITED STATES
       US 20080293607
                           A1 20081127
PΙ
       US 2008-41917
                           A1 20080304 (12)
ΑТ
PRAI
       US 2007-905811P
                           20070309 (60)
DT
       Utility
FS
       APPLICATION
       GENENCOR INTERNATIONAL, INC., 925 PAGE MILL ROAD, PALO ALTO, CA,
LREP
       94304-1013, US
       Number of Claims: 55
CLMN
ECL
       Exemplary Claim: 1
DRWN
       6 Drawing Page(s)
LN.CNT 4171
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Disclosed are variants of the \alpha-amylase derived from Bacillus sp.
       number 707, compositions comprising said variants, compositions comprising
       the variants, and methods of using the variants. The methods of use
       include methods of cleaning surfaces, laundering textiles, desizing,
       hydrolyzing biofilms off various substrates, and treating starch (e.g.,
       liquefaction and saccharification).
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 2 OF 31 USPATFULL on STN
T.7
       2008:333939 USPATFULL <<LOGINID::20090326>>
ΑN
       PLANT WALL DEGRADATIVE COMPOUNDS AND SYSTEMS
ΤТ
       Taylor, Larry Edmund, Lakewood, CO, UNITED STATES
TN
       Weiner, Ronald M., Potomac, MD, UNITED STATES
       Hutcheson, Steven Wayne, Columbia, MD, UNITED STATES
       Ekborg, Nathan A., Beverly, MA, UNITED STATES
       Howard, Michael, Annapolis, MD, UNITED STATES
PΙ
       US 20080293115
                           A1 20081127
ΑI
       US 2008-99653
                           A1 20080408 (12)
       Division of Ser. No. US 2005-121154, filed on 4 May 2005, Pat. No. US
RLI
PRAI
       US 2004-567971P
                           20040504 (60)
DT
       Utility
       APPLICATION
FS
       MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C, ATTN: PATENT INTAKE
LREP
       CUSTOMER NO. 30623, ONE FINANCIAL CENTER, BOSTON, MA, 02111, US
       Number of Claims: 15
CLMN
ECL
       Exemplary Claim: 1-31
DRWN
       12 Drawing Page(s)
LN.CNT 1050
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to cell wall degradative systems, in
       particular to systems containing enzymes that bind to and/or
       depolymerize cellulose. These systems have a number of
       applications.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

ANSWER 3 OF 31 USPATFULL on STN

2008:333572 USPATFULL <<LOGINID::20090326>>

T.7

MA

ΤТ

```
MODIFIED AMYLASE FROM PSEUDOMONAS SACCHAROPHILIA
ΤI
TN
       Berg, Casper Tune, Vedbaek, DENMARK
       Derkx, Patrick Maria Franciscus, Tikob, DENMARK
       Fioresi, Carol, Redwood City, CA, UNITED STATES
       Gerritse, Gijsbert, Heerjansdam, NETHERLANDS
       Kellet-Smith, Anja Hemmingen, Copenhagen, DENMARK
       Kragh, Karsten Matthias, Viby J, DENMARK
       Liu, Wei, Palo Alto, CA, UNITED STATES
       Shaw, Andrew, San Francisco, CA, UNITED STATES
       Sorensen, Bo Spange, Skanderborg, DENMARK
       Thoudahl, Charlotte Refdahl, Greve, DENMARK
PΙ
       US 20080292747
                            A1 20081127
ΑI
       US 2008-970473
                            A1 20080107 (11)
       Continuation-in-part of Ser. No. WO 2006-GB2513, filed on 7 Jul 2006,
RLI
       PENDING
       US 2005-697302P
                            20050707 (60)
PRAI
DT
       Utility
       APPLICATION
FS
LREP
       FROMMER LAWRENCE & HAUG, 745 FIFTH AVENUE- 10TH FL., NEW YORK, NY,
       10151, US
CLMN
       Number of Claims: 58
ECL
       Exemplary Claim: 1
DRWN
       4 Drawing Page(s)
LN.CNT 4954
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Described is a PS4 variant polypeptide derivable from a polypeptide
       having amylase activity selected from: (a) a polypeptide comprising an
       amino acid mutation at each of positions 33, 34, 121, 134, 141, 146, 157, 161, 178, 179, 223, 229, 272, 303, 307, 309 and 334; (b) a
       polypeptide comprising an amino acid mutation at each of positions 33,
       34, 121, 134, 141, 145, 146, 157, 178, 179, 223, 229, 272, 303, 307 and
       334; (c) a polypeptide comprising an amino acid mutation at each of
       positions 33, 34, 121, 134, 141, 146, 157, 178, 179, 223, 229, 272, 303,
       307, 309 and 334; and (d) a polypeptide comprising an amino acid
       mutation at each of positions 3, 33, 34, 70, 121, 134, 141, 146, 157,
       178, 179, 223, 229, 272, 303, 307, 309 and 334; referring to the
       numbering of a Pseudomonas saccharophilia exoamylase shown as SEQ ID NO:
       1.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 4 OF 31 USPATFULL on STN
ΑN
       2008:329069 USPATFULL <<LOGINID::20090326>>
TΙ
       Polypeptides having endoglucanase activity and polynucleotides encoding
       Harris, Paul, Carnation, WA, UNITED STATES
TN
       Lopez de Leon, Alfredo, Davis, CA, UNITED STATES
       Rey, Michael, Davis, CA, UNITED STATES
       Ding, Hanshu, Davis, CA, UNITED STATES
       Vlasenko, Elena, Davis, CA, UNITED STATES
       Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PA
PΙ
       US 20080289067
                            A1
                                20081120
ΑI
       US 2006-413022
                            A1
                                20060427 (11)
PRAI
       US 2005-675601P
                            20050427 (60)
DT
       Utility
       APPLICATION
FS
LREP
       NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
CLMN
       Number of Claims: 52
       Exemplary Claim: 1
ECL
       9 Drawing Page(s)
DRWN
```

LN.CNT 2816

CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to isolated polypeptides having endoglucanase activity and isolated polynucleotides encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the polynucleotides as well as methods for producing and using the polypeptides. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L7ANSWER 5 OF 31 USPATFULL on STN 2008:319494 USPATFULL <<LOGINID::20090326>> ΑN ΤI Polypeptides Having Endoglucanase Activity and Polynucleotides Encoding Same ΙN Johansen, Katja Salomon, Gentofte, DENMARK Gibson, Keith, Bagsvaerd, DENMARK Nielsen, Preben, Hoersholm, DENMARK Outtrup, Helle, Vaerloese, DENMARK PТ US 20080280325 A1 20081113 ΑI US 2006-90400 A1 20061115 (12) WO 2006-EP68509 20061115 20080416 PCT 371 date PRAI DK 2005-1599 20051116 US 2005-738430P 20051121 (60) DT Utility FS APPLICATION NOVOZYMES NORTH AMERICA, INC., 500 FIFTH AVENUE, SUITE 1600, NEW YORK, LREP NY, 10110, US CLMN Number of Claims: 16 ECL Exemplary Claim: 1-20 8 Drawing Page(s) DRWN LN.CNT 2223 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to isolated polypeptides having endoglucanase activity and isolated polynucleotides encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the polynucleotides as well as methods for producing and using the polypeptides. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L7ANSWER 6 OF 31 USPATFULL on STN ΑN TΙ Polypeptide ΙN BERG, Casper Tune, Vedbak, DENMARK Derkx, Patrick Maria Franciscus, Tikob, DENMARK Fioresi, Carol, Redwood City, CA, UNITED STATES Gerritse, Gijsbert, Heerjansdam, NETHERLANDS Kellet-Smith, Anja Hemmingen, Copenhagen, DENMARK Kragh, Karsten Matthias, Viby J, DENMARK Liu, Wei, Palo Alto, CA, UNITED STATES Shaw, Andrew, San Francisco, CA, UNITED STATES Sorensen, Bo Spange, Skanderborg, DENMARK Thoudahl, Charlotte Refdahl, Greve, DENMARK PΙ US 20080227173 A1 20080918 A1 20060922 (11) US 2006-534624 ΑТ RLI Continuation-in-part of Ser. No. WO 2006-GB2513, filed on 7 Jul 2006, PENDING Continuation-in-part of Ser. No. US 2006-483220, filed on 7 Jul 2006, PENDING

20050707 (60)

PRAI

DT ES US 2005-697302P

Utility

APPLICATION

```
FROMMER LAWRENCE & HAUG, 745 FIFTH AVENUE- 10TH FL., NEW YORK, NY,
LREP
       10151, US
       Number of Claims: 27
CLMN
       Exemplary Claim: 1
ECL
DRWN
       4 Drawing Page(s)
LN.CNT 5142
```

The invention describes a PS4 variant polypeptide derivable from a parent polypeptide having amylase activity selected from the group consisting of: (a) a polypeptide comprising an amino acid mutation at each of positions 33, 34, 121, 134, 141, 146, 157, 161, 178, 179, 223, 229, 272, 303, 307, 309 and 334; (b) a polypeptide comprising an amino acid mutation at each of positions 33, 34, 121, 134, 141, 145, 146, 157, 178, 179, 223, 229, 272, 303, 307 and 334; (c) a polypeptide comprising an amino acid mutation at each of positions 33, 34, 121, 134, 141, 146, 157, 178, 179, 223, 229, 272, 303, 307, 309 and 334; and (d) a polypeptide comprising an amino acid mutation at each of positions 3, 33, 34, 70, 121, 134, 141, 146, 157, 178, 179, 223, 229, 272, 303, 307, 309 and 334; with reference to the position numbering of a Pseudomonas saccharophilia exoamylase sequence shown as SEQ ID NO: 1, uses of such a polypeptide as a food or feed additive, and nucleic acids encoding such.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 7 OF 31 USPATFULL on STN
L7
       2008:245870 USPATFULL <<LOGINID::20090326>>
ΑN
       Polypeptides Having Cellobiohydrolase II Activity And Polynucleotides
TΙ
       Encoding Same
ΙN
       Wu, Wenping, Beijing, CHINA
       Lange, Lene, Valby, DENMARK
       Skovlund, Dominique Aubert, Copehnagen N, DENMARK
       Liu, Ye, Beijing, CHINA
       Novozymes A/S, Bagsvaerd, DENMARK (non-U.S. corporation)
PA
                           A1 20080904
PΙ
       US 20080213835
       US 2007-958527
                           A1 20071218 (11)
ΑI
RLI
       Division of Ser. No. US 2005-540091, filed on 20 Jun 2005, Pat. No. US
       7348168 A 371 of International Ser. No. WO 2003-DK914, filed on 19 Dec
       2003
PRAI
       US 2002-435100P
                           20021220 (60)
DT
       Utility
FS
       APPLICATION
LREP
       NOVOZYMES NORTH AMERICA, INC., 500 FIFTH AVENUE, SUITE 1600, NEW YORK,
       NY, 10110, US
       Number of Claims: 12
CLMN
```

Exemplary Claim: 1-22 ECL

DRWN No Drawings

LN.CNT 3847

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to polypeptides having cellobiohydrolase AB II activity and polynucleotides having a nucleotide sequence which encodes for the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acid constructs as well as methods for producing and using the polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- L7 ANSWER 8 OF 31 USPATFULL on STN
- ΑN 2008:39013 USPATFULL <<LOGINID::20090326>>
- ΤI Annotated Plant Genes
- TNCheikh, Nordine, 16534 Baxter Forest Ridge, Chesterfield, MO, UNITED STATES 63005

Liu, Jingdong, 2200 Sycamore Drive, Chesterfield, MO, UNITED STATES 63017 РΤ US 20080034453 A1 20080207 US 1999-371146 A1 19990809 (9) AΙ Continuation-in-part of Ser. No. US 1999-9304517, filed on 6 May 1999, RLI abandoned DTUtility APPLICATION FS ARNOLD & PORTER, LLP, 555 TWELFTH STREET, N.W., ATTN: IP DOCKETING, LREP WASHINGTON, DC, 20004, UNITED STATES Number of Claims: 10 Exemplary Claim: 1 DRWN No Drawings LN.CNT 16595 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention is in the field of plant biochemistry. More AR specifically the invention relates to nucleic acid sequences from plant cells, in particular, nucleic acid sequences from maize and soybean. The invention encompasses nucleic acid molecules that encode proteins and fragments of proteins. In addition, the invention also encompasses proteins and fragments of proteins so encoded and antibodies capable of binding these proteins or fragments. The invention also relates to methods of using the nucleic acid molecules, proteins and fragments of proteins, and antibodies, for example for genome mapping, gene identification and analysis, plant breeding, preparation of constructs for use in plant gene expression, and transgenic plants. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 9 OF 31 USPATFULL on STN T.7 ΑN 2008:4470 USPATFULL <<LOGINID::20090326>> Polypeptides having cellulolytic enhancing activity and polynucleotides ΤТ encoding same Dotson, William D., Plainsboro, NJ, UNITED STATES Greenier, Jennifer, Vacaville, CA, UNITED STATES Ding, Hanshu, Davis, CA, UNITED STATES Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation) PΙ US 20080003645 A1 20080103 US 2007-835872 A1 20070808 (11) Continuation of Ser. No. US 2005-51670, filed on 4 Feb 2005, GRANTED, Pat. No. US 7271244

IN PA

ΑI

RLT

PRAI US 2004-542614P 20040206 (60)

DT Utility

FS APPLICATION

NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US LREP

Number of Claims: 22 CLMN ECL Exemplary Claim: 1 DRWN 5 Drawing Page(s)

LN.CNT 3646

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to isolated polypeptides having cellulolytic enhancing activity and isolated nucleic acids encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acids as well as methods for producing and using the polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 31 USPATFULL on STN T.7

2007:335033 USPATFULL <<LOGINID::20090326>> ΔN

ΤТ Enzyme systems for saccharification of plant cell wall polysaccharides

```
Weiner, Ronald M., Potomac, MD, UNITED STATES
ΙN
       Hutcheson, Steven Wayne, Columbia, MD, UNITED STATES
                           A1 20071220
       US 20070292929
РΤ
       US 2006-519104
                           A1 20060912 (11)
ΑI
       Continuation-in-part of Ser. No. US 2005-121154, filed on 4 May 2005,
RLI
       PENDING
PRAI
       US 2004-567971P
                           20040504 (60)
DT
       Utility
FS
       APPLICATION
       ARENT FOX LLP, 1050 CONNECTICUT AVENUE, N.W., SUITE 400, WASHINGTON, DC,
LREP
       20036, US
       Number of Claims: 20
CLMN
ECL
       Exemplary Claim: 1
DRWN
       11 Drawing Page(s)
LN.CNT 1244
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to cell wall degradative systems, in
       particular to systems containing enzymes that bind to and/or
       depolymerize cellulose. These systems have a number of
       applications. Some embodiments relate to a method of producing ethanol
       using the cell wall degradative systems of the present invention.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 11 OF 31 USPATFULL on STN
       2007:162139 USPATFULL <<LOGINID::20090326>>
ΑN
TΙ
       Polypeptide
IN
       Berg, Casper Tune, Vedbek, DENMARK
       Derkx, Patrick Maria Franciscus, Tikob, DENMARK
       Fioresi, Carol, Redwood City, CA, UNITED STATES
       Gerritse, Gijsbert, Heerjansdam, NETHERLANDS
       Kellet-Smith, Anja Hemmingen, Copenhagen, DENMARK
       Kragh, Karsten Matthias, Viby J, DENMARK
       Liu, Wei, Hayward, CA, UNITED STATES
       Shaw, Andrew, San Francisco, CA, UNITED STATES
       Sorensen, Bo Spange, Skanderborg, DENMARK
       Thoudahl, Charlotte Refdahl, Greve, DENMARK
PΙ
       US 20070141693
                           A1 20070621
       US 2006-483220
                           A1 20060707 (11)
ΑI
PRAI
       US 2005-697302P
                           20050707 (60)
DT
       Utility
FS
       APPLICATION
LREP
       FROMMER LAWRENCE & HAUG, 745 FIFTH AVENUE- 10TH FL., NEW YORK, NY,
       10151, US
       Number of Claims: 27
CLMN
       Exemplary Claim: 1
ECL
       4 Drawing Page(s)
DRWN
LN.CNT 3998
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention provides for a PS4 variant polypeptide derivable from a
AΒ
       parent polypeptide having amylase activity which may be selected from
       the group consisting of: (a) a polypeptide comprising an amino acid
       mutation at each of positions 33, 34, 121, 134, 141, 146, 157, 161, 178,
       179, 223, 229, 272, 303, 307, 309 and 334; (b) a polypeptide comprising
       an amino acid mutation at each of positions 33, 34, 121, 134, 141, 145,
       146, 157, 178, 179, 223, 229, 272, 303, 307 and 334; (c) a polypeptide
       comprising an amino acid mutation at each of positions 33, 34, 121, 134,
       141, 146, 157, 178, 179, 223, 229, 272, 303, 307, 309 and 334; and (d) a
       polypeptide comprising an amino acid mutation at each of positions 3,
       33, 34, 70, 121, 134, 141, 146, 157, 178, 179, 223, 229, 272, 303, 307,
       309 and 334; with reference to the position numbering of a Pseudomonas
```

saccharophilia exoamylase sequence shown as SEQ ID NO: 1, uses of such a polypeptide as a food or feed additive, and nucleic acids encoding such.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

FS

LREP

CLMN

APPLICATION

Number of Claims: 23

20036, US

```
ANSWER 12 OF 31 USPATFULL on STN
L7
ΑN
       2007:120989 USPATFULL <<LOGINID::20090326>>
ΤI
       Cyclodextrin affinity purification
ΙN
       Villafranca, Joseph John, New Hope, PA, UNITED STATES
       Hakes, David James, Willow Grove, PA, UNITED STATES
       Johnson, Karl F., Hatboro, PA, UNITED STATES
       Willett, Walter Scott, Doylestown, PA, UNITED STATES
       Meyers, Chester A., Medford, NJ, UNITED STATES
PΙ
       US 20070105192
                           A1 20070510
ΑI
      US 2004-555123
                           A1 20040505 (10)
      WO 2004-US13841
                               20040505
                               20060807 PCT 371 date
       US 2003-60468374
PRAI
                           20030505
DT
       Utility
FS
       APPLICATION
LREP
      MORGAN, LEWIS & BOCKIUS LLP (SF), 2 PALO ALTO SQUARE, 3000 El Camino
       Real, Suite 700, PALO ALTO, CA, 94306, US
       Number of Claims: 33
CLMN
ECL
      Exemplary Claim: 1
DRWN
       10 Drawing Page(s)
LN.CNT 3259
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method of immobilizing a molecular species that include a
       starch-binding domain is provided. There also is provided a material
       upon which the molecular species is immobilized, and a material that is
       capable of immobilizing the species The method includes binding the
       species to a solid support, e.g., membranes, chromatographic supports
       and the like. The immobilized species is optionally purified by the
       method of the invention. Alternatively, the immobilized species is use
       in another method, such as in a synthesis as a synthetic
       reagent, or to purify another species that has an affinity for the
       immobilized species. Exemplary immobilized molecular species include
       bioactive agents, and biomolecules.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 13 OF 31 USPATFULL on STN
ΑN
       2007:82804 USPATFULL <<LOGINID::20090326>>
TΙ
       Polypeptide
       Kragh, Karsten Matthias, Viby, DENMARK
ΤN
       Mulder, Harm, Copenhagen, DENMARK
       Petersen, Steffen, Aalborg, DENMARK
       Fomsgaard, Helle, Aalborg, DENMARK
       Veltman, Oene Robert, Aalborg, DENMARK
       Danisco A/S, Copenhagen, DENMARK (non-U.S. corporation)
PA
                          A1 20070329
PΙ
       US 20070072270
                           A1
ΑI
       US 2006-635511
                               20061208 (11)
RLI
       Division of Ser. No. US 2004-864874, filed on 10 Jun 2004, GRANTED, Pat.
       No. US 7166453
       GB 2003-13754
                           20030613
PRAI
       US 2003-479505P
                           20030619 (60)
DT
       Utility
```

STEPTOE & JOHNSON LLP, 1330 CONNECTICUT AVENUE, N.W., WASHINGTON, DC,

```
Exemplary Claim: 1
ECL
       3 Drawing Page(s)
DRWN
LN.CNT 4234
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       We disclose a PS4 variant polypeptide derivable from a parent
       polypeptide, the parent polypeptide having non-maltogenic exoamylase
       activity, which PS4 variant polypeptide comprises one or more of the
       following substitutions: G69P, A141P, G223A, A268P, G313P, S399P and
       G400P, with reference to the position numbering of a Pseudomonas
       saccharophilia exoamylase sequence shown as SEQ ID NO: 1. Such PS4
       variant polypeptides may be used as exo-amylases, particularly as
       non-maltogenic exoamylases. Combinations of such PS4 variant
       polypeptides together with Novamyl are disclosed.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    ANSWER 14 OF 31 USPATFULL on STN
T.7
ΑN
       2006:125180 USPATFULL <<LOGINID::20090326>>
ΤI
       Plant wall degradative compounds and systems
ΙN
       Taylor, Larry Edmund, Palmyra, PA, UNITED STATES
       Weiner, Ronald M., Potomac, MD, UNITED STATES
       Hutcheson, Steven Wayne, Columbia, MD, UNITED STATES
       Ekborg, Nathan A., Beverly, MA, UNITED STATES
       Howard, Michael, Diamondhead, MS, UNITED STATES
PΙ
       US 20060105914
                           A1 20060518
                           B2 20080429
A1 20050504 (11)
       US 7365180
       US 2005-121154
ΑI
PRAI
       US 2004-567971P
                           20040504 (60)
       Utility
DT
FS
       APPLICATION
LREP
       ARENT FOX PLLC, 1050 CONNECTICUT AVENUE, N.W., SUITE 400, WASHINGTON,
       DC, 20036, US
       Number of Claims: 31
CLMN
ECL
       Exemplary Claim: 1
DRWN
       11 Drawing Page(s)
LN.CNT 1056
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to cell wall degradative systems, in
       particular to systems containing enzymes that bind to and/or
       depolymerize cellulose. These systems have a number of
       applications.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
1.7
     ANSWER 15 OF 31 USPATFULL on STN
       2006:62342 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Polypeptides having cellobiohydrolase II activity and polynucleotides
       encoding same
       Wu, Wenping, Beijing, CHINA
IN
       Lange, Lene, Valby, DENMARK
       Skovlund, Dominique Aubert, Copenhagen N, DENMARK
       Liu, Ye, Beijing, CHINA
       Novozymes A/S, Bagsvaerd, DENMARK (non-U.S. corporation)
PA
PΙ
       US 20060053514
                           A1 20060309
                           В2
       US 7348168
                               20080325
       US 2003-540091
                           A1 20031219 (10)
ΑI
       WO 2003-DK914
                               20031219
                               20050620 PCT 371 date
PRAI
       US 2002-435100P
                          20021220 (60)
DТ
       Utility
FS
       APPLICATION
```

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NOVOZYMES NORTH AMERICA, INC., 500 FIFTH AVENUE, SUITE 1600, NEW YORK,
LREP
       NY, 10110, US
       Number of Claims: 13
CLMN
ECL
       Exemplary Claim: 1-22
       No Drawings
DRWN
LN.CNT 3792
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to polypeptides having cellobiohydrolase
       II activity and polynucleotides having a nucleotide sequence which
       encodes for the polypeptides. The invention also relates to nucleic acid
       constructs, vectors, and host cells comprising the nucleic acid
       constructs as well as methods for producing and using the polypeptides.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 16 OF 31 USPATFULL on STN
       2006:5819 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Polypeptides having cellulolytic enhancing activity and polynucleotides
       encoding same
       Dotson, William D., Plainsboro, NJ, UNITED STATES
ΙN
       Greenier, Jennifer, Vacaville, CA, UNITED STATES
       Ding, Hanshu, Davis, CA, UNITED STATES
PA
       Novozymes Biotech, Inc., Davis, CA, UNITED STATES, 95616 (U.S.
       corporation)
PΙ
       US 20060005279
                           A1 20060105
                           B2 20070918
A1 20050204 (11)
       US 7271244
       US 2005-51670
ΑI
PRAI
       US 2004-542614P
                           20040206 (60)
       Utility
DT
FS
       APPLICATION
LREP
       NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
       Number of Claims: 66
CLMN
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Page(s)
LN.CNT 3663
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to isolated polypeptides having
       cellulolytic enhancing activity and isolated nucleic acids encoding the
       polypeptides. The invention also relates to nucleic acid constructs,
       vectors, and host cells comprising the nucleic acids as well as methods
       for producing and using the polypeptides.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
1.7
     ANSWER 17 OF 31 USPATFULL on STN
       2005:189443 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Methods for degrading lignocellulosic materials
       Vlasenko, Elena, Davis, CA, UNITED STATES
ΙN
       Cherry, Joel, Davis, CA, UNITED STATES
       Xu, Feng, Davis, CA, UNITED STATES
PA
       Novozymes Biotech, Inc., Davis, CA, UNITED STATES (U.S. corporation)
                           A1 20050728
PΙ
       US 20050164355
       US 7354743
                           В2
                               20080408
                           A1 20050114 (11)
       US 2005-36871
ΑI
       US 2004-537452P
                           20040116 (60)
PRAI
       Utility
DT
FS
       APPLICATION
       NOVOZYMES BIOTECH, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
LREP
CLMN
       Number of Claims: 53
ECL
       Exemplary Claim: 1
```

DRWN

29 Drawing Page(s)

LN.CNT 3003

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to methods for degrading a lignocellulosic material, comprising: treating the lignocellulosic material with an effective amount of one or more cellulolytic enzymes in the presence of at least one surfactant selected from the group consisting of a secondary alcohol ethoxylate, fatty alcohol ethoxylate, nonylphenol ethoxylate, tridecyl ethoxylate, and polyoxyethylene ether, wherein the presence of the surfactant increases the degradation of lignocellulosic material compared to the absence of the surfactant. The present invention also relates to methods for producing an organic substance, comprising: (a) saccharifying a lignocellulosic material with an effective amount of one or more cellulolytic enzymes in the presence of at least one surfactant selected from the group consisting of a secondary alcohol ethoxylate, fatty alcohol ethoxylate, nonylphenol ethoxylate, tridecyl ethoxylate, and polyoxyethylene ether, wherein the presence of the surfactant increases the degradation of lignocellulosic material compared to the absence of the surfactant; (b) fermenting the saccharified lignocellulosic material of step (a) with one or more fermentating microoganisms; and (c) recovering the organic substance from the fermentation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L7 ANSWER 18 OF 31 USPATFULL on STN
AN 2005:43663 USPATFULL <<LOGINID::20090326>>
```

AN 2005:43663 USPAIRULL <<LUGINID::

TI Polypeptide

IN Kragh, Karsten Mathias, Viby, DENMARK
Mulder, Harm, Copenhagen, DENMARK
Petersen, Steffan, Aalborg, DENMARK
Fomsgaard, Helle, Aalborg, DENMARK
Veltman, Oene Robert, Aalborg, DENMARK

PI US 20050037391 A1 20050217 US 7166453 B2 20070123 AI US 2004-864874 A1 20040610 (10)

PRAI GB 2003-13754 20030613 US 2003-479505P 20030619 (60)

DT Utility FS APPLICATION

LREP Harold H. Fox, Steptoe & Johnson LLP, Box USPTO, 1330 Connecticut Avenue, N.W., Washington, DC, 20036

CLMN Number of Claims: 60 ECL Exemplary Claim: 1 DRWN 6 Drawing Page(s)

LN.CNT 4409

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB We disclose a PS4 variant polypeptide derivable from a parent polypeptide, the parent polypeptide having non-maltogenic exoamylase activity, which PS4 variant polypeptide comprises one or more of the following substitutions: G69P, A141P, G223A, A268P, G313P, S399P and G400P, with reference to the position numbering of a Pseudomonas saccharophilia exoamylase sequence shown as SEQ ID NO: 1. Such PS4 variant polypeptides may be used as exo-amylases, particularly as non-maltogenic exoamylases.

Combinations of such PS4 variant polypeptides together with Novamyl are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 19 OF 31 USPATFULL on STN

```
2004:140285 USPATFULL <<LOGINID::20090326>>
ΑN
ΤТ
       Glucan chain length domains
ΤN
       Commuri, Padma, Ankeny, IA, UNITED STATES
       Keeling, Peter L., Ames, IA, UNITED STATES
       Ramirez, Nona, Ames, IA, UNITED STATES
       McKean, Angela, Ames, IA, UNITED STATES
       Gao, Zhong, Ames, IA, UNITED STATES
       Guan, Hanping, Ames, IA, UNITED STATES
PΙ
       US 20040107461
                          A1 20040603
ΑI
       US 2002-109048
                           A1 20020329 (10)
PRAI
       US 2001-279720P
                           20010330 (60)
DT
       Utility
FS
       APPLICATION
       NIXON & VENDERHYE P.C., 8th Floor, 1100 North Glebe Road, Arlington, VA,
LREP
       22201-4714
       Number of Claims: 53
CLMN
       Exemplary Claim: 1
ECL
DRWN
       22 Drawing Page(s)
LN.CNT 12564
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The invention relates to a method for changing the glucan
       chain lengths using fusion protein domains of various starch synthase
       enzymes in any starch or starch granule producing organism. The
       invention relates to identification of a GLucan ASSociation
       domain (herein after referred to as "GLASS" domain) of granule bound
       starch synthase (GBSS) used in combination with any other GLYcosyl
       TRransferase domain otherwise referred to as pfam00534-catalytic domain
       (herein after referred to as "GLYTR" domain) of one or more of any of
       the other starch synthase enzymes. The invention relates to identifying
       and using the new and surprising discovery that starch synthases are
       composed of at least two distinct functional domains herein after
       labeled as "GLASS" and "GLYTR". More specifically, this invention
       relates to the genetic constructs that encode the fusions of the above
       domains and to the plants transformed with said constructs. The method
       of invention can thus be used in particular to provide a modified
       profile of starch granule associated starch synthase (SS) enzymes and by
       which modified glucan chain lengths of amylopectin and hence,
       modified starches and or complexes will be generated. This can be done
       in any organism and more particularly any plant that stores or
       synthesizes starch in any of its parts, such as potato, sweet potato,
       cassaya, pea, taro, banana, yam and cereal crops such as rice, maize,
       wheat, barley, oats, and sorghum.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 20 OF 31 USPATFULL on STN
L7
       2001:36957 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Polypeptide with reduced respiratory allergenicity
       Olsen, Arne Agerlin, Virum, Denmark
TN
       Hansen, Lars Bo, Herlev, Denmark
       Beck, Thomas Christian, Birker.o slashed.d, Denmark
       Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PA
PΙ
       US 6201110
                           B1 20010313
                               20000706 (9)
ΑI
       US 2000-610751
       Continuation of Ser. No. US 1999-405311, filed on 20 Sep 1999, now
RLI
       patented, Pat. No. US 6114509 Continuation of Ser. No. US 1998-150891,
       filed on 10 Sep 1998, now patented, Pat. No. US 5981718 Continuation of
       Ser. No. US 1997-836293, filed on 12 May 1997, now patented, Pat. No. US
       5856451 Continuation of Ser. No. WO 1994-DK9500497, filed on 7 Dec 1994
                           19941207
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PRAI

DK 1994-1395 DK 1994-1396

19941207

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DK 1994-1397
                           19941207
       DK 1994-1398
                           19941207
       DK 1994-1399
                           19941207
       DK 1994-1400
                           19941207
       DK 1994-1401
                           19941207
DT
      Utility
FS
       Granted
EXNAM Primary Examiner: Sayala, Chhaya D.
      Lambiris, Esq., Elias J.
       Number of Claims: 14
ECL
       Exemplary Claim: 1
       5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2239
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention relates to modified polypeptides with reduced respiratory
       allergenicity comprising a parent polypeptide with a molecular weight
       from between 10 kDa and 100 kDa conjugated to a polymer with a molecular
       weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified
       polypeptide are produced using a process including the step of
       conjugating from 1 to 30 polymer molecules with the parent polypeptide.
       Further the invention relates to compositions comprising said
       polypeptides and further ingredients normally used in e.g. detergents,
       including dishwashing detergents and soap bars, household article,
       agrochemicals, personal care products, cosmetics, toiletries, oral and
       dermal pharmaceuticals, composition for treating textiles, and
       compositions used for manufacturing food and feed. Finally the invention
       is directed to uses of polypeptides with reduced allergenicity or
       compositions thereof for reducing the allergenicity of products for a
       vast number of industrial applications.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    ANSWER 21 OF 31 USPATFULL on STN
T.7
       2000:124776 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Endo-xyloglucan transferase
ΤN
       Nishitani, Kazuhiko, Kagoshima, Japan
       Okazawa, Kazuhide, Otsu, Japan
       Asada, Kiyozo, Shiga-ken, Japan
       Kato, Ikunoshin, Uji, Japan
PΑ
       Takara Shuzo Co., Ltd., Kyoto, Japan (non-U.S. corporation)
PΙ
       US 6120998
                               20000919
ΑI
      US 1998-52085
                               19980331 (9)
RLI
      Division of Ser. No. US 1995-445533, filed on 22 May 1995, now patented,
       Pat. No. US 5840550 which is a division of Ser. No. US 1995-381280,
       filed on 31 Jan 1995, now patented, Pat. No. US 5516694 which is a
       continuation of Ser. No. US 1993-37281, filed on 26 Mar 1993, now
       abandoned which is a continuation-in-part of Ser. No. US 1992-929513,
       filed on 14 Aug 1992, now abandoned
      JP 1992-98506
PRAI
                           19920326
      JP 1992-217489
                           19920724
       JP 1993-31163
                           19930128
DT
      Utility
FS
       Granted
      Primary Examiner: Elliott, George C.; Assistant Examiner: Schmidt,
EXNAM
       Melissa
       Wenderoth, Lind & Ponack, L.L.P.
LREP
CLMN
      Number of Claims: 28
ECL
       Exemplary Claim: 1
DRWN
       16 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2859
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

AB Endo-xyloglucan transferases responsible for growth of plant cell wall, genes coding for the enzymes, a method of transferring xyloglucan molecules by using the enzyme, and methods of using the gene are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L7
     ANSWER 22 OF 31 USPATFULL on STN
ΑN
       2000:117890 USPATFULL <<LOGINID::20090326>>
ΤI
       Polypeptide with reduced allergenicity
ΙN
       Olsen, Arne Agerlin, Virum, Denmark
       Hansen, Lars Bo, Herlev, Denmark
       Beck, Thomas Christian, Birker.o slashed.d, Denmark
PΑ
       Novo Nordisk A/S, Bagsvard, Denmark (non-U.S. corporation)
PΙ
       US 6114509
                               20000905
ΑI
       US 1999-405311
                               19990920 (9)
       Continuation of Ser. No. US 1998-150891, filed on 10 Sep 1998, now
RLI
       patented, Pat. No. US 5981718 which is a continuation of Ser. No. US
       1997-836293, filed on 12 May 1997, now patented, Pat. No. US 5856451
       which is a continuation of Ser. No. WO 1995-DK497, filed on 7 Dec 1995
PRAI
       DK 1994-1395
                           19941207
       DK 1994-1396
                           19941207
       DK 1994-1397
                           19941207
       DK 1994-1398
                           19941207
       DK 1994-1399
                           19941207
       DK 1994-1400
                           19941207
       DK 1994-1401
                           19941207
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Sayala, Chhaya D.
LREP
       Zelson, Esq., Steve T., Green, Esq., Reza
       Number of Claims: 21
CLMN
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2255
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The invention relates to modified polypeptides with reduced
       allergenicity comprising a parent polypeptide with a molecular weight
       from between 10 kDa and 100 kDa conjugated to a polymer with a molecular
       weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified
       polypeptide are produced using a process including the step of
       conjugating from 1 to 30 polymer molecules with the parent polypeptide.
       Further the invention relates to compositions comprising said
       polypeptides and further ingredients normally used in e.g. detergents,
       including dishwashing detergents and soap bars, household article,
       agrochemicals, personal care products, cosmetics, toiletries, oral and
       dermal pharmaceuticals, composition for treating textiles, and
       compositions used for manufacturing food and feed. Finally the invention
       is directed to uses of polypeptides with reduced allergenicity or
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compositions thereof for reducing the allergenicity of products for a

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

vast number of industrial applications.

```
L7 ANSWER 23 OF 31 USPATFULL on STN
AN 1999:142125 USPATFULL <<LOGINID::20090326>>
TI Polypeptide with reduced allergenicity
IN Olsen, Arne Agerlin, Virum, Denmark
Hansen, Lars Bo, Herlev, Denmark
Beck, Thomas Christian, Birker.o slashed.d, Denmark
Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
```

```
РΤ
       US 5981718
                               19991109
                               19980910 (9)
ΑТ
       US 1998-150891
RLT
       Continuation of Ser. No. US 1997-836293, filed on 12 May 1997, now
       patented, Pat. No. US 5856451 which is a continuation of Ser. No. WO
       1995-DK497, filed on 7 Dec 1995
       DK 1994-1395
                           19941207
PRAI
       DK 1994-1396
                           19941207
       DK 1994-1397
                           19941207
       DK 1994-1398
                           19941207
       DK 1994-1399
                           19941207
       DK 1994-1400
                           19941207
       DK 1994-1401
                           19941207
DT
       Utility
       Granted
EXNAM Primary Examiner: Sayala, Chhaya D.
       Zelson, Esq., Steve T., Esq., Reza Green
LREP
       Number of Claims: 12
CLMN
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2257
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The invention relates to modified polypeptides with reduced
       allergenicity comprising a parent polypeptide with a molecular weight
       from between 10 kDa and 100 kDa conjugated to a polymer with a molecular
       weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified
       polypeptide are produced using a process including the step of
       conjugating from 1 to 30 polymer molecules with the parent polypeptide.
       Further the invention relates to compositions comprising said
       polypeptides and fruther ingredients normally used in e.g. detergents,
       including dishwashing detergents and soap bars, household article,
       agrochemicals, personal care products, cosmetics, toiletries, oral and
       dermal pharmaceuticals, composition for treating textiles, and
       compositions used for manufacturing food and feed. Finally the invention
       is directed to uses of polypeptides with reduced allergenicity or
       compositions thereof for reducing the allergenicity of products for a
       vast number of industrial applications.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 24 OF 31 USPATFULL on STN
ΑN
       1999:1779 USPATFULL <<LOGINID::20090326>>
ΤI
       Method for reducing respiratory allergenicity
ΙN
       Olsen, Arne Agerlin, Virum, Denmark
       Hansen, Lars Bo, Herlev, Denmark
       Beck, Thomas Christian, Birker.o slashed.d, Denmark
       Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PΑ
       US 5856451
                               19990105
PΙ
       WO 9617929
                               19960613
       US 1997-836293
ΑI
                               19970512 (8)
       WO 1995-DK497
                               19951207
                               19970512 PCT 371 date
                               19970512 PCT 102(e) date
PRAI
       DK 1994-1395
                           19941207
       DK 1994-1396
                           19941207
       DK 1994-1397
                           19941207
       DK 1994-1398
                           19941207
       DK 1994-1399
                           19941207
       DK 1994-1400
                           19941207
       DK 1994-1401
                           19941207
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DT

FS

Utility

Granted

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EXNAM Primary Examiner: Sayala, Chhaya D.
       Zelson, Esq., Steve T., Agris, Esq., Cheryl H.
LREP
       Number of Claims: 37
CLMN
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2323
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention relates to modified polypeptides with reduced
       allergenicity comprising a parent polypeptide with a molecular weight
       from between 10 kDa and 100 kDa conjugated to a polymer with a molecular
       weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified
       polypeptide are produced using a process including the step of
       conjugating from 1 to 30 polymer molecules with the parent polypeptide.
       Further the invention relates to compositions comprising said
       polypeptides and further ingredients normally used in e.g. detergents,
       including dishwashing detergents and soap bars, household article,
       agrochemicals, personal care products, cosmetics, toiletries, oral and
       dermal pharmaceuticals, composition for treating textiles, and
       compositions used for manufacturing food and feed. Finally the invention
       is directed to uses of polypeptides with reduced allergenicity or
       compositions thereof for reducing the allergenicity of products for a
       vast number of industrial applications.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 25 OF 31 USPATFULL on STN
L7
       1998:147272 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Endo-xyloglucan transferase
IN
       Nishitani, Kazuhiko, Kagoshima, Japan
       Okazawa, Kazuhide, Otsu, Japan
       Asada, Kiyozo, Shiga-ken, Japan
       Kato, Ikunoshin, Uji, Japan
       Takara Shuzo Co., Ltd., Kyoto-fu, Japan (non-U.S. corporation)
PA
PΙ
       US 5840550
                               19981124
       US 1995-445533
                               19950522 (8)
ΑI
RLI
       Division of Ser. No. US 1995-381280, filed on 31 Jan 1995, now patented,
       Pat. No. US 5516694 which is a continuation of Ser. No. US 1993-37281,
       filed on 26 Mar 1993, now abandoned which is a continuation-in-part of
       Ser. No. US 1992-929513, filed on 14 Aug 1992, now abandoned
PRAI
      JP 1992-98506
                           19920326
       JP 1992-217489
                           19920724
       JP 1993-31163
                           19930128
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Patterson, Jr., Charles L.; Assistant Examiner: Hobbs,
       Lisa J.
LREP
       Wenderoth, Lind & Ponack
       Number of Claims: 6
CLMN
ECL
       Exemplary Claim: 1
DRWN
       17 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2941
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Endo-xyloglucanase transferases responsible for growth of plant cell
       wall, genes coding for the enzymes, a method of transferring xyloglucan
       molecules by using the enzyme, and methods of using the gene are
       described.
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 26 OF 31 USPATFULL on STN AN 96:41134 USPATFULL <<LOGINID::20090326>>

```
Endo-xyloglucan transferase
ΤI
       Nishitani, Kazuhiko, Kagoshima, Japan
TN
       Okazawa, Kazuhide, Otsu, Japan
       Asada, Kiyozo, Shiga, Japan
       Kato, Ikunoshin, Uji, Japan
       Takara Shuzo Co., Ltd., Kyoto, Japan (non-U.S. corporation)
PA
PΙ
       US 5516694
                               19960514
       US 1995-381280
ΑI
                               19950131 (8)
RLI
       Continuation of Ser. No. US 1993-37281, filed on 26 Mar 1993, now
       abandoned which is a continuation-in-part of Ser. No. US 1992-929513,
       filed on 14 Aug 1992, now abandoned
       JP 1992-98506
                          19920326
PRAI
      JP 1992-217489
                           19920724
       JP 1993-31163
                           19930128
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Low, Christopher S. F.
       Wenderoth, Lind & Ponack
LREP
       Number of Claims: 16
CLMN
ECL
       Exemplary Claim: 1
DRWN
       17 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2746
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Endo-xyloglucan transferases responsible for growth of plant cell wall,
       genes coding for the enzymes, a method of transferring xyloglucan
       molecules by using the enzyme, and methods of using the gene are
       described.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    ANSWER 27 OF 31 USPAT2 on STN
T.7
       2006:125180 USPAT2 <<LOGINID::20090326>>
ΑN
ΤТ
       Plant wall degradative compounds and systems
       Taylor, Larry Edmund, Lakewood, CO, UNITED STATES
TN
       Weiner, Ronald M., Potomac, MD, UNITED STATES
       Hutcheson, Steven Wayne, Columbia, MD, UNITED STATES
       Ekborg, Nathan A., Beverly, MA, UNITED STATES
       Howard, Michael, Annapolis, MD, UNITED STATES
       University of Maryland, College Park, MD, UNITED STATES (U.S.
PA
       corporation)
PΙ
       US 7365180
                           B2 20080429
ΑI
       US 2005-121154
                               20050504 (11)
       US 2004-567971P
PRAI
                           20040504 (60)
DT
       Utility
FS
       GRANTED
EXNAM Primary Examiner: Guzo, David; Assistant Examiner: Joike, Michele K.
       Arent Fox LLP
LREP
       Number of Claims: 3
CLMN
ECL
       Exemplary Claim: 1
DRWN
       13 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1092
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to cell wall degradative systems, in
       particular to systems containing enzymes that bind to and/or
       depolymerize cellulose. These systems have a number of
       applications.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 28 OF 31 USPAT2 on STN
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2006:62342 USPAT2 <<LOGINID::20090326>>

T.7

MA

```
Polypeptides having cellobiohydrolase II activity and polynucleotides
       encoding same
       Wu, Wenping, Beijing, CHINA
TN
       Lange, Lene, Valby, DENMARK
       Skovlund, Dominique Aubert, Copenhagen, DENMARK
       Liu, Ye, Beijing, CHINA
       Novozymes A/S, Bagsvaerd, DENMARK (non-U.S. corporation)
PA
PΙ
       US 7348168
                           B2 20080325
       WO 2004056981
                               20040708
       US 2003-540091
                               20031219 (10)
ΑТ
       WO 2003-DK914
                               20031219
                               20050620 PCT 371 date
PRAI
      US 2002-435100P
                           20021220 (60)
DT
      Utility
FS
       GRANTED
EXNAM Primary Examiner: Prouty, Rebecca E.; Assistant Examiner: Chowdhury,
       Lambiris, Elias
LREP
      Number of Claims: 12
CLMN
ECL
      Exemplary Claim: 1
DRWN
      No Drawings
LN.CNT 3584
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to polypeptides having cellobiohydrolase
       II activity and polynucleotides having a nucleotide sequence, which
       encodes for the polypeptides. The invention also relates to nucleic acid
       constructs, vectors, and host cells comprising the nucleic acid
       constructs as well as methods for producing and using the polypeptides.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 29 OF 31 USPAT2 on STN
L7
       2006:5819 USPAT2 <<LOGINID::20090326>>
AN
ΤI
       Polypeptides having cellulolytic enhancing activity and polynucleotides
       encoding same
ΙN
       Dotson, William D., Plainsboro, NJ, UNITED STATES
       Greenier, Jennifer, Vacaville, CA, UNITED STATES
       Ding, Hanshu, Davis, CA, UNITED STATES
       Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PA
PΙ
      US 7271244
                           B2 20070918
ΑI
      US 2005-51670
                               20050204 (11)
PRAI
      US 2004-542614P
                          20040206 (60)
DT
      Utility
FS
      GRANTED
EXNAM Primary Examiner: Rao, Manjunath
      Starnes, Robert L.
LREP
      Number of Claims: 27
CLMN
ECL
       Exemplary Claim: 1
      5 Drawing Figure(s); 5 Drawing Page(s)
DRWN
LN.CNT 3640
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to isolated polypeptides having
AΒ
       cellulolytic enhancing activity and isolated nucleic acids encoding the
       polypeptides. The invention also relates to nucleic acid constructs,
       vectors, and host cells comprising the nucleic acids as well as methods
       for producing and using the polypeptides.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

ANSWER 30 OF 31 USPAT2 on STN

2005:189443 USPAT2 <<LOGINID::20090326>>

T.7 MA

ΤТ

```
Methods for degrading lignocellulosic materials
ΤI
TN
       Vlasenko, Elena, Davis, CA, UNITED STATES
       Cherry, Joel, Davis, CA, UNITED STATES
       Xu, Feng, Davis, CA, UNITED STATES
       Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PA
PΙ
       US 7354743
                           В2
                               20080408
ΑI
       US 2005-36871
                               20050114 (11)
       US 2004-537452P
                           20040116 (60)
PRAI
DT
       Utility
       GRANTED
EXNAM Primary Examiner: Lilling, Herbert J.
LREP
       Starnes, Robert L.
CLMN
       Number of Claims: 13
ECL
       Exemplary Claim: 1
DRWN
       29 Drawing Figure(s); 29 Drawing Page(s)
LN.CNT 2914
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to methods for degrading a lignocellulosic
AB
       material, comprising: treating the lignocellulosic material with an
       effective amount of one or more cellulolytic enzymes in the presence of
       at least one surfactant selected from the group consisting of a
       secondary alcohol ethoxylate, fatty alcohol ethoxylate, nonylphenol
       ethoxylate, tridecyl ethoxylate, and polyoxyethylene ether, wherein the
       presence of the surfactant increases the degradation of lignocellulosic
       material compared to the absence of the surfactant. The present
       invention also relates to methods for producing an organic substance,
       comprising: (a) saccharifying a lignocellulosic material with an
       effective amount of one or more cellulolytic enzymes in the presence of
       at least one surfactant selected from the group consisting of a
       secondary alcohol ethoxylate, fatty alcohol ethoxylate, nonylphenol
       ethoxylate, tridecyl ethoxylate, and polyoxyethylene ether, wherein the
       presence of the surfactant increases the degradation of lignocellulosic
       material compared to the absence of the surfactant; (b) fermenting the
       saccharified lignocellulosic material of step (a) with one or more
       fermentating microoganisms; and (c) recovering the organic substance
       from the fermentation.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 31 OF 31 USPAT2 on STN
       2005:43663 USPAT2 <<LOGINID::20090326>>
ΑN
ΤI
       Polypeptide
ΙN
       Kragh, Karsten Matthias, Viby, DENMARK
       Mulder, Harm, Copenhagen, DENMARK
       Petersen, Steffen, Aalborg, DENMARK
       Fomsgaard, Helle, Aalborg, DENMARK
       Veltman, Oene Robert, Aalborg, DENMARK
       Danisco A/S, Copenhagen, DENMARK (non-U.S. corporation)
PA
                           B2 20070123
PΤ
       US 7166453
ΑI
       US 2004-864874
                               20040610 (10)
PRAI
       GB 2003-13754
                           20030613
       US 2003-479505P
                           20030619 (60)
DT
       Utility
FS
       GRANTED
      Primary Examiner: Prouty, Rebecca E.; Assistant Examiner: Meah, Mohammad
EXNAM
LREP
       Steptoe & Johnson LLP
CLMN
       Number of Claims: 24
ECL
       Exemplary Claim: 1
DRWN
       3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 4250
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

AB We disclose a PS4 variant polypeptide derivable from a parent polypeptide, the parent polypeptide having non-maltogenic exoamylase activity, which PS4 variant polypeptide comprises one or more of the following substitutions: G69P, A141P, G223A, A268P, G313P, S399P and G400P, with reference to the position numbering of a Pseudomonas saccharophilia exoamylase sequence shown as SEQ ID NO: 1. Such PS4 variant polypeptides may be used as exo-amylases, particularly as non-maltogenic exoamylases. Combinations of such PS4 variant polypeptides together with Novamyl are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
=> s 12 and cellulase
          1684 L2 AND CELLULASE
=> s 18 and oligosaccharides
           466 L8 AND OLIGOSACCHARIDES
=> s 19 and (non-reducing(a)end)
  23 FILES SEARCHED...
           135 L9 AND (NON-REDUCING(A) END)
=> s 110 and (GLC and Gal)
             2 L10 AND (GLC AND GAL)
=> dis l11 1-2 bib abs
L11 ANSWER 1 OF 2 USPATFULL on STN
       2008:39013 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Annotated Plant Genes
TM
       Cheikh, Nordine, 16534 Baxter Forest Ridge, Chesterfield, MO, UNITED
       STATES 63005
       Liu, Jingdong, 2200 Sycamore Drive, Chesterfield, MO, UNITED STATES
       63017
PΙ
       US 20080034453
                           A1 20080207
ΑI
       US 1999-371146
                           A1 19990809 (9)
       Continuation-in-part of Ser. No. US 1999-9304517, filed on 6 May 1999,
RLI
       abandoned
DT
       Utility
FS
       APPLICATION
LREP
       ARNOLD & PORTER, LLP, 555 TWELFTH STREET, N.W., ATTN: IP DOCKETING,
       WASHINGTON, DC, 20004, UNITED STATES
CLMN
       Number of Claims: 10
       Exemplary Claim: 1
ECL
      No Drawings
DRWN
LN.CNT 16595
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention is in the field of plant biochemistry. More
AB
       specifically the invention relates to nucleic acid sequences from plant
       cells, in particular, nucleic acid sequences from maize and soybean. The
       invention encompasses nucleic acid molecules that encode proteins and
       fragments of proteins. In addition, the invention also encompasses
       proteins and fragments of proteins so encoded and antibodies capable of
       binding these proteins or fragments. The invention also relates to
```

methods of using the nucleic acid molecules, proteins and fragments of

identification and analysis, plant breeding, preparation of constructs

proteins, and antibodies, for example for genome mapping, gene

for use in plant gene expression, and transgenic plants.

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L11 ANSWER 2 OF 2 USPATFULL on STN
       2007:120989 USPATFULL <<LOGINID::20090326>>
ΑN
TΙ
       Cyclodextrin affinity purification
ΙN
       Villafranca, Joseph John, New Hope, PA, UNITED STATES
       Hakes, David James, Willow Grove, PA, UNITED STATES
       Johnson, Karl F., Hatboro, PA, UNITED STATES
       Willett, Walter Scott, Doylestown, PA, UNITED STATES
       Meyers, Chester A., Medford, NJ, UNITED STATES
       US 20070105192
                           A1 20070510
PΙ
ΑI
       US 2004-555123
                           A1 20040505 (10)
       WO 2004-US13841
                               20040505
                               20060807 PCT 371 date
PRAI
       US 2003-60468374
                           20030505
DT
       Utility
FS
       APPLICATION
       MORGAN, LEWIS & BOCKIUS LLP (SF), 2 PALO ALTO SQUARE, 3000 El Camino
LREP
       Real, Suite 700, PALO ALTO, CA, 94306, US
       Number of Claims: 33
CLMN
ECL
       Exemplary Claim: 1
       10 Drawing Page(s)
DRWN
LN.CNT 3259
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       A method of immobilizing a molecular species that include a
       starch-binding domain is provided. There also is provided a material
       upon which the molecular species is immobilized, and a material that is
       capable of immobilizing the species The method includes binding the
       species to a solid support, e.g., membranes, chromatographic supports
       and the like. The immobilized species is optionally purified by the
       method of the invention. Alternatively, the immobilized species is use
       in another method, such as in a synthesis as a synthetic reagent, or to
       purify another species that has an affinity for the immobilized species.
       Exemplary immobilized molecular species include bioactive agents, and
       biomolecules.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
=> s 110 and catalyst
L12
            33 L10 AND CATALYST
=> dis 112 1-33 bib abs
L12 ANSWER 1 OF 33 USPATFULL on STN
       2009:20977 USPATFULL <<LOGINID::20090326>>
AN
ΤТ
       Polypeptides having cellulolytic enhancing activity and polynucleotides
       encoding same
       Lopez de Leon, Alfredo, Davis, CA, UNITED STATES
ΙN
       Ding, Hanshu, Davis, CA, UNITED STATES
       Brown, Kimberly, Elk Grove, CA, UNITED STATES
PA
       Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PΙ
       US 20090019608
                           A1
                               20090115
ΑI
       US 2008-130722
                           Α1
                               20080530 (12)
PRAI
       US 2007-941234P
                           20070531 (60)
       Utility
FS
       APPLICATION
LREP
       NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
CLMN
       Number of Claims: 30
       Exemplary Claim: 1
ECL
DRWN
       12 Drawing Page(s)
LN.CNT 6851
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to isolated polypeptides having cellulolytic enhancing activity and isolated polynucleotides encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the polynucleotides as well as methods of producing and using the polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 2 OF 33 USPATFULL on STN 2009:9046 USPATFULL <<LOGINID::20090326>> ΤI Affinity Foam Fractionation for Collection and Purification of Materials ΙN Ju, Lu-Kwang, Akron, OH, UNITED STATES Zhang, Qin, Akron, OH, UNITED STATES PATHE UNIVERSITY OF AKRON, Akron, OH, UNITED STATES (U.S. corporation) PΙ US 20090008325 A1 20090108 US 2006-912306 A1 20060428 (11) ΑI WO 2006-US16325 20060428 20080630 PCT 371 date US 2005-676232P 20050429 (60) PRAI DT Utility FS APPLICATION ROETZEL AND ANDRESS, 222 SOUTH MAIN STREET, AKRON, OH, 44308, US LREP CLMN Number of Claims: 19 Exemplary Claim: 1 ECL DRWN 9 Drawing Page(s) LN.CNT 995

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention generally relates to methods for purifying and/or concentrating compounds from or in solutions and/or mixtures. In one embodiment, the present invention relates to a method for purifying and/or concentrating a compound from a solution or mixture. In another embodiment, the present invention relates to a method for purifying/concentrating a compound from a solution or mixture that utilizes, in whole or part, foam purification and/or concentration. In still another embodiment, the present invention can be used to separate, concentrate and/or purify any material, including biological products and/or biomaterials, that can be selectively bound to a binding agent, thereby yielding a complex that will readily partition onto bubble surfaces in a foam.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L12 ANSWER 3 OF 33 USPATFULL on STN
       2008:341247 USPATFULL <<LOGINID::20090326>>
ΑN
ΤТ
       Compositions for degrading cellulosic material
TN
       Merino, Sandra, West Sacramento, CA, UNITED STATES
       McFarland, Keith, Davis, CA, UNITED STATES
       Cherry, Joel, Davis, CA, UNITED STATES
       Teter, Sarah, Menlo Park, CA, UNITED STATES
PA
       Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PΙ
       US 20080299613
                           A1 20081204
ΑI
       US 2008-130838
                           Α1
                               20080530 (12)
       US 2007-941251P
                           20070531 (60)
PRAI
       Utility
FS
       APPLICATION
LREP
       NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
CLMN
       Number of Claims: 33
       Exemplary Claim: 1
ECL
       14 Drawing Page(s)
DRWN
LN.CNT 10157
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to cellulolytic compositions for degrading or converting cellulose-containing material and methods of producing and using the compositions. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L12 ANSWER 4 OF 33 USPATFULL on STN ΑN 2008:334431 USPATFULL <<LOGINID::20090326>> Alkaliphilic Bacillus Species alpha-Amylase Variants, Compositions TΙ Comprising alpha-Amylase Variants, And Methods of Use Jones, Brian E., Liedschendam, NETHERLANDS TNVroemen, Casper, Oegstgeest, NETHERLANDS Chang, Claudine, Mountain View, CA, UNITED STATES Naab, Corey, North Chili, NY, UNITED STATES De Nobel, Hans, Heemstede, NETHERLANDS Kolkman, Marc, Oegstgeest, NETHERLANDS Weyler, Walter, San Francisco, CA, UNITED STATES PТ US 20080293607 A1 20081127 US 2008-41917 20080304 (12) ΑI Α1 PRAI US 2007-905811P 20070309 (60) DT Utility FS APPLICATION LREP GENENCOR INTERNATIONAL, INC., 925 PAGE MILL ROAD, PALO ALTO, CA, 94304-1013, US Number of Claims: 55 CLMN Exemplary Claim: 1 ECL DRWN 6 Drawing Page(s) LN.CNT 4171 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Disclosed are variants of the α -amylase derived from Bacillus sp. number 707, compositions comprising said variants, compositions comprising the variants, and methods of using the variants. The methods of use include methods of cleaning surfaces, laundering textiles, desizing, hydrolyzing biofilms off various substrates, and treating starch (e.g., liquefaction and saccharification). CAS INDEXING IS AVAILABLE FOR THIS PATENT. L12 ANSWER 5 OF 33 USPATFULL on STN ΑN 2008:333933 USPATFULL <<LOGINID::20090326>> ΤI Methods for degrading or converting plant cell wall polysaccharides ΙN Berka, Randy, Davis, CA, UNITED STATES Cherry, Joel, Davis, CA, UNITED STATES Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation) PΑ A1 20081127 РΤ US 20080293109 A1 ΑI US 2008-172852 20080714 (12) Division of Ser. No. US 2005-78921, filed on 10 Mar 2005, Pat. No. US RLI 7413882 US 2004-556779P PRAI 20040325 (60) DT Utility FS APPLICATION NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US LREP Number of Claims: 21 CLMN ECL Exemplary Claim: 1 17 Drawing Page(s) DRWN LN.CNT 3284 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to methods for converting plant cell wall

polysaccharides into one or more products, comprising: treating the plant cell wall polysaccharides with an effective amount of a spent

AB

whole fermentation broth of a recombinant microorganism, wherein the recombinant microorganism expresses one or more heterologous genes encoding enzymes which degrade or convert the plant cell wall polysaccharides into the one or more products. The present invention also relates to methods for producing an organic substance, comprising: (a) saccharifying plant cell wall polysaccharides with an effective amount of a spent whole fermentation broth of a recombinant microorganism, wherein the recombinant microorganism expresses one or more heterologous genes encoding enzymes which degrade or convert the plant cell wall polysaccharides into saccharified material; (b) fermenting the saccharified material of step (a) with one or more fermenting microoganisms; and (c) recovering the organic substance from the fermentation.

ΑI

PRAI

US 2006-997625

WO 2006-US30719

US 2005-705607P 20050804 (60)

```
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 6 OF 33 USPATFULL on STN
ΑN
       ΤI
       Polypeptides having cellulolytic enhancing activity and nucleic acids
       encoding same
ΙN
       Brown, Kimberly, Elk Grove, CA, UNITED STATES
       Harris, Paul, Carnation, WA, UNITED STATES
       Zaretsky, Elizabeth, Reno, NV, UNITED STATES
      Re, Edward, Davis, CA, UNITED STATES
      Vlasenko, Elena, Davis, CA, UNITED STATES
      McFarland, Keith, Davis, CA, UNITED STATES
      Lopez de Leon, Alfredo, Davis, CA, UNITED STATES
      NOVOZYMES, INC., Davis, CA, UNITED STATES (U.S. corporation)
PA
                          A1 20080828
A1 20080321 (12)
PΙ
      US 20080206815
ΑI
      US 2008-53193
RLI
      Division of Ser. No. US 2005-46124, filed on 28 Jan 2005, Pat. No. US
      7361495
      US 2004-540661P
                          20040130 (60)
PRAI
DТ
      Utility
FS
      APPLICATION
LREP
      NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
CLMN
      Number of Claims: 20
ECL
      Exemplary Claim: 1
DRWN
      37 Drawing Page(s)
LN.CNT 6620
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to isolated polypeptides having
       cellulolytic enhancing activity and isolated polynucleotides encoding
       the polypeptides. The invention also relates to nucleic acid constructs,
      vectors, and host cells comprising the polynucleotides as well as
      methods for producing and using the polypeptides.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 7 OF 33 USPATFULL on STN
       2008:229662 USPATFULL <<LOGINID::20090326>>
AN
ΤI
       Polypeptides Having Beta-Glucosidase Activity and Polynucleotides
       Encoding Same
      Krogh, Kristian, Bagsvaerd, DENMARK
IN
       Harris, Paul, Carnation, WA, UNITED STATES
      Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PA
PΙ
      US 20080201805
                          A1 20080821
```

A1 20060804 (11)

20060804

20080201 PCT 371 date

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DT Utility FS APPLICATION
```

LREP NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US

CLMN Number of Claims: 42 ECL Exemplary Claim: 1 DRWN 11 Drawing Page(s)

LN.CNT 3577

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to isolated polypeptides having beta-glucosidase activity and isolated polynucleotides encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the polynucleotides as well as methods for producing and using the polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L12 ANSWER 8 OF 33 USPATFULL on STN
```

AN 2008:221096 USPATFULL <<LOGINID::20090326>>

TI KLUYVEROMYCES STRAINS METABOLIZING CELLULOSIC AND HEMICELLULOSIC MATERIALS

IN Levine, Robert Paul, Palo Alto, CA, UNITED STATES

PA Phage Biotechnology, Las Vegas, NV, UNITED STATES (U.S. corporation)

PI US 20080193992 A1 20080814

AI US 2008-24889 A1 20080201 (12)

RLI Division of Ser. No. US 2004-759785, filed on 16 Jan 2004, Pat. No. US 7344876

PRAI US 2003-442455P 20030124 (60)

DT Utility

FS APPLICATION

LREP KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US

CLMN Number of Claims: 30 ECL Exemplary Claim: 1 DRWN 7 Drawing Page(s)

LN.CNT 1145

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to the use of microorganisms for the generation of ethanol from lignocellulosic waste materials. Yeast strains of the genus Kluyveromyces which have the capability to ferment cellulose, hexose sugars to ethanol are provided. Also provided are methods for converting cellulose, hexoses, or mixed hydrolysates of hexoses to ethanol by fermentation with Kluyveromyces strains. The invention also provides methods to isolate yeast strains which metabolize cellulose, pentoses, or hemicelluloses from waste materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L12 ANSWER 9 OF 33 USPATFULL on STN
```

AN 2008:221095 USPATFULL <<LOGINID::20090326>>

TI PROCESS FOR IMPROVING THE YIELD AND EFFICIENCY OF AN ETHANOL FERMENTATION PLANT

IN Allen, Stephen D., Eagle, ID, UNITED STATES
Rusnack, Michael R., Star, ID, UNITED STATES

PA WATER SOLUTIONS, INC., Sioux Falls, SD, UNITED STATES (U.S. corporation)

PI US 20080193991 A1 20080814 AI US 2008-30578 A1 20080213 (12)

PRAI US 2007-889644P 20070213 (60)

US 2007-955282P 20070810 (60)

DT Utility

FS APPLICATION

LREP KIRTON AND MCCONKIE, 60 EAST SOUTH TEMPLE,, SUITE 1800, SALT LAKE CITY,

UT, 84111, US

CLMN Number of Claims: 20 ECL Exemplary Claim: 1 DRWN 6 Drawing Page(s)

LN.CNT 810

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for improving the yield and efficiency of an ethanol fermentation plant that receives organic fermentable feedstock material, prepares the feedstock for fermentation, ferments the feedstock with yeast to produce ethanol, and produces stillage as a byproduct of ethanol fermentation. The process steps which can be operated independently or in combination, may include, but are not limited to, degrading fatty acids in the fermentable feedstock material prior to fermentation; degrading cellulose and hemicellulose present in the feedstock prior to fermentation; adding a surfactant to the fermentable feedstock; separating a liquid fraction from the stillage; recycling the liquid fraction to be combined with the fermentable feedstock; recovering a solid fraction from the stillage; and introducing at least a portion of the solid fraction to an anaerobic digester to produce methane.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 10 OF 33 USPATFULL on STN

AN 2008:195715 USPATFULL <<LOGINID::20090326>>

TI DETOXIFYING PRE-TREATED LIGNOCELLULOSE-CONTAINING MATERIALS

IN Holmes, Jason W., Zebulon, NC, UNITED STATES
Deinhammer, Randy, Wake Forest, NC, UNITED STATES
Soong, Chee Leong, Raleigh, NC, UNITED STATES

PA Novozymes North America, Inc., Franklinton, NC, UNITED STATES (U.S.

corporation)

PI US 20080171370 A1 20080717 AI US 2007-954482 A1 20071212 (11)

PRAI US 2006-870420P 20061218 (60) US 2007-890652P 20070220 (60)

DT Utility

FS APPLICATION

LREP NOVOZYMES NORTH AMERICA, INC., 500 FIFTH AVENUE, SUITE 1600, NEW YORK, NY, 10110, US

CLMN Number of Claims: 21 ECL Exemplary Claim: 1-24

DRWN 6 Drawing Page(s)

LN.CNT 1631

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a process of detoxifying pretreated lignocellulose-containing maternal by subjecting pre-treated material to a detoxifying compound capable of binding 1) pre-treated lignocellulose degradation products and/or 2) acetic acid. The detoxifying compound may also be an amidase and/or and anhydrase. The invention also relates to a process of producing a fermentation product including a detoxification process of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 11 OF 33 USPATFULL on STN

AN 2008:4470 USPATFULL <<LOGINID::20090326>>

TI Polypeptides having cellulolytic enhancing activity and polynucleotides encoding same

IN Dotson, William D., Plainsboro, NJ, UNITED STATES Greenier, Jennifer, Vacaville, CA, UNITED STATES Ding, Hanshu, Davis, CA, UNITED STATES

```
Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PΑ
                           A1 20080103
РΤ
       US 20080003645
ΑТ
                           A1 20070808 (11)
       US 2007-835872
RLI
       Continuation of Ser. No. US 2005-51670, filed on 4 Feb 2005, GRANTED,
       Pat. No. US 7271244
       US 2004-542614P
                          20040206 (60)
PRAI
DT
       Utility
FS
      APPLICATION
      NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
      Number of Claims: 22
CLMN
       Exemplary Claim: 1
ECL
       5 Drawing Page(s)
DRWN
LN.CNT 3646
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to isolated polypeptides having
       cellulolytic enhancing activity and isolated nucleic acids encoding the
       polypeptides. The invention also relates to nucleic acid constructs,
       vectors, and host cells comprising the nucleic acids as well as methods
       for producing and using the polypeptides.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 12 OF 33 USPATFULL on STN
ΑN
       2007:179507 USPATFULL <<LOGINID::20090326>>
TΙ
       Amylases, nucleic acids encoding them and methods for making and using
       them
       Callen, Walter, San Diego, CA, UNITED STATES
ΙN
       Richardson, Toby, San Diego, CA, UNITED STATES
       Frey, Gerhard, San Diego, CA, UNITED STATES
       Gray, Kevin, San Diego, CA, UNITED STATES
       Kerovuo, Janne S., San Diego, CA, UNITED STATES
       Slupska, Malgorzata, San Diego, CA, UNITED STATES
       Barton, Nelson, San Diego, CA, UNITED STATES
       O'Donoghue, Eileen, San Diego, CA, UNITED STATES
      Miller, Carl, Raleigh, NC, UNITED STATES
PΙ
      US 20070157329
                          A1 20070705
ΑI
      US 2004-547957
                           A1 20040308 (10)
      WO 2004-US7096
                               20040308
                               20060630 PCT 371 date
      US 2003-10385305
                           20030306
       US 2003-459014P
                           20030328 (60)
DT
       Utility
FS
      APPLICATION
LREP
       DIVERSA C/O MOFO S.D., 12531 HIGH BLUFF DRIVE, SUITE 100, SAN DIEGO, CA,
       92130-2040, US
      Number of Claims: 86
CLMN
       Exemplary Claim: 1
ECL
      163 Drawing Page(s)
DRWN
LN.CNT 9683
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       In one aspect, the invention is directed to polypeptides having an
       amylase activity, polynucleotides encoding the polypeptides, and methods
       for malting and using these polynucleotides and polypeptides. In one
       aspect, the polypeptides of the invention can be used as amylases, for
       example, alpha amylases, to catalyze the hydrolysis of starch into
       sugars. In one aspect, the invention provides delayed release
       compositions comprising an desired ingredient coated by a latex polymer
       coating.
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L12 ANSWER 13 OF 33 USPATFULL on STN
       2007:120989 USPATFULL <<LOGINID::20090326>>
ΑN
       Cyclodextrin affinity purification
ΤТ
ΙN
       Villafranca, Joseph John, New Hope, PA, UNITED STATES
       Hakes, David James, Willow Grove, PA, UNITED STATES
       Johnson, Karl F., Hatboro, PA, UNITED STATES
       Willett, Walter Scott, Doylestown, PA, UNITED STATES
       Meyers, Chester A., Medford, NJ, UNITED STATES
PΙ
       US 20070105192
                           A1 20070510
ΑI
       US 2004-555123
                           A1 20040505 (10)
       WO 2004-US13841
                               20040505
                               20060807 PCT 371 date
PRAI
       US 2003-60468374
                           20030505
DT
       Utility
FS
       APPLICATION
       MORGAN, LEWIS & BOCKIUS LLP (SF), 2 PALO ALTO SQUARE, 3000 El Camino
LREP
       Real, Suite 700, PALO ALTO, CA, 94306, US
CLMN
       Number of Claims: 33
ECL
       Exemplary Claim: 1
DRWN
       10 Drawing Page(s)
LN.CNT 3259
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method of immobilizing a molecular species that include a
       starch-binding domain is provided. There also is provided a material
       upon which the molecular species is immobilized, and a material that is
       capable of immobilizing the species The method includes binding the
       species to a solid support, e.g., membranes, chromatographic supports
       and the like. The immobilized species is optionally purified by the
       method of the invention. Alternatively, the immobilized species is use
       in another method, such as in a synthesis as a synthetic reagent, or to
       purify another species that has an affinity for the immobilized species.
       Exemplary immobilized molecular species include bioactive agents, and
       biomolecules.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 14 OF 33 USPATFULL on STN
ΑN
       2007:89057 USPATFULL <<LOGINID::20090326>>
ΤI
       Methods for enhancing the degradation or conversion of cellulosic
       material
       Harris, Paul, Carnation, WA, UNITED STATES
ΙN
       Rey, Michael, Davis, CA, UNITED STATES
       Ding, Hanshu, Davis, CA, UNITED STATES
PA
       Novozymes, Inc., Davis, CA, UNITED STATES, 95616 (U.S. corporation)
       US 20070077630
                          A1 20070405
PΙ
       US 2006-541099
                           A1
ΑI
                               20060929 (11)
       US 2005-722579P
PRAI
                           20050930 (60)
       Utility
DT
FS
       APPLICATION
       NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
LREP
CLMN
       Number of Claims: 75
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Page(s)
LN.CNT 3521
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to methods for degrading or converting a
       cellulosic material and for producing a substance from a cellulosic
       material.
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L12 ANSWER 15 OF 33 USPATFULL on STN
       2006:5819 USPATFULL <<LOGINID::20090326>>
ΑN
ΤТ
       Polypeptides having cellulolytic enhancing activity and polynucleotides
       encoding same
       Dotson, William D., Plainsboro, NJ, UNITED STATES
TN
       Greenier, Jennifer, Vacaville, CA, UNITED STATES
       Ding, Hanshu, Davis, CA, UNITED STATES
       Novozymes Biotech, Inc., Davis, CA, UNITED STATES, 95616 (U.S.
PA
       corporation)
       US 20060005279
                          A1 20060105
PΙ
       US 7271244
                          B2 20070918
       US 2005-51670
                          A1 20050204 (11)
ΑI
PRAI
      US 2004-542614P
                          20040206 (60)
      Utility
DT
FS
      APPLICATION
      NOVOZYMES, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
LREP
      Number of Claims: 66
CLMN
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Page(s)
LN.CNT 3663
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to isolated polypeptides having
       cellulolytic enhancing activity and isolated nucleic acids encoding the
       polypeptides. The invention also relates to nucleic acid constructs,
       vectors, and host cells comprising the nucleic acids as well as methods
       for producing and using the polypeptides.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 16 OF 33 USPATFULL on STN
ΑN
       2005:268106 USPATFULL <<LOGINID::20090326>>
ΤТ
       Methods for degrading or converting plant cell wall polysaccharides
ΙN
       Berka, Randy, Davis, CA, UNITED STATES
       Cherry, Joel, Davis, CA, UNITED STATES
       Novozymes Biotech, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PA
       US 20050233423
PΙ
                          A1 20051020
       US 7413882
                          B2 20080819
       US 2005-78921
                          A1 20050310 (11)
PRAI
      US 2004-556779P
                          20040325 (60)
DT
      Utility
      APPLICATION
LREP
      NOVOZYMES BIOTECH, INC., 1445 DREW AVE, DAVIS, CA, 95616, US
CLMN
      Number of Claims: 42
ECL
       Exemplary Claim: 1
      17 Drawing Page(s)
DRWN
LN.CNT 3179
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to methods for converting plant cell wall
AB
       polysaccharides into one or more products, comprising: treating the
       plant cell wall polysaccharides with an effective amount of a spent
       whole fermentation broth of a recombinant microorganism, wherein the
       recombinant microorganism expresses one or more heterologous genes
       encoding enzymes which degrade or convert the plant cell wall
       polysaccharides into the one or more products. The present invention
       also relates to methods for producing an organic substance, comprising:
       (a) saccharifying plant cell wall polysaccharides with an effective
       amount of a spent whole fermentation broth of a recombinant
       microorganism, wherein the recombinant microorganism expresses one or
       more heterologous genes encoding enzymes which degrade or convert the
       plant cell wall polysaccharides into saccharified material; (b)
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fermenting the saccharified material of step (a) with one or more

fermenting microoganisms; and (c) recovering the organic substance from the fermentation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT. L12 ANSWER 17 OF 33 USPATFULL on STN ΑN 2005:221001 USPATFULL <<LOGINID::20090326>> Polypeptides having cellulolytic enhancing activity andpolynucleotides ΤI encoding same Brown, Kimberly, Elk Grove, CA, UNITED STATES ΙN Harris, Paul, Carnation, WA, UNITED STATES Zaretsky, Elizabeth, Reno, NV, UNITED STATES Re, Edward, Davis, CA, UNITED STATES Vlasenko, Elena, Davis, CA, UNITED STATES McFarland, Keith, Davis, CA, UNITED STATES Lopez de Leon, Alfredo, Davis, CA, UNITED STATES Novozymes Biotech, Inc., Davis, CA, UNITED STATES (U.S. corporation) PΑ PΙ US 20050191736 A1 20050901 US 7361495 B2 20080422 US 2005-46124 A1 20050128 (11) ΑI PRAI US 2004-540661P 20040130 (60) DTUtility FS APPLICATION NOVOZYMES BIOTECH, INC., 1445 DREW AVE, DAVIS, CA, 95616, US LREP Number of Claims: 73 CLMN ECL Exemplary Claim: 1 37 Drawing Page(s) DRWN LN.CNT 6721 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ The present invention relates to isolated polypeptides having cellulolytic enhancing activity and isolated polynucleotides encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the polynucleotides as well as methods for producing and using the polypeptides. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L12 ANSWER 18 OF 33 USPATFULL on STN ΑN 2005:189443 USPATFULL <<LOGINID::20090326>> ΤI Methods for degrading lignocellulosic materials ΙN Vlasenko, Elena, Davis, CA, UNITED STATES Cherry, Joel, Davis, CA, UNITED STATES Xu, Feng, Davis, CA, UNITED STATES PANovozymes Biotech, Inc., Davis, CA, UNITED STATES (U.S. corporation) US 20050164355 A1 20050728 PΙ US 7354743 B2 20080408 US 2005-36871 A1 20050114 (11) ΑI US 2004-537452P 20040116 (60) PRAI DT Utility FS APPLICATION NOVOZYMES BIOTECH, INC., 1445 DREW AVE, DAVIS, CA, 95616, US LREP CLMN Number of Claims: 53 ECL Exemplary Claim: 1 29 Drawing Page(s) DRWN LN.CNT 3003 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ The present invention relates to methods for degrading a lignocellulosic material, comprising: treating the lignocellulosic material with an effective amount of one or more cellulolytic enzymes in the presence of

at least one surfactant selected from the group consisting of a secondary alcohol ethoxylate, fatty alcohol ethoxylate, nonylphenol

ethoxylate, tridecyl ethoxylate, and polyoxyethylene ether, wherein the presence of the surfactant increases the degradation of lignocellulosic material compared to the absence of the surfactant. The present invention also relates to methods for producing an organic substance, comprising: (a) saccharifying a lignocellulosic material with an effective amount of one or more cellulolytic enzymes in the presence of at least one surfactant selected from the group consisting of a secondary alcohol ethoxylate, fatty alcohol ethoxylate, nonylphenol ethoxylate, tridecyl ethoxylate, and polyoxyethylene ether, wherein the presence of the surfactant increases the degradation of lignocellulosic material compared to the absence of the surfactant; (b) fermenting the saccharified lignocellulosic material of step (a) with one or more fermentating microoganisms; and (c) recovering the organic substance from the fermentation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L12 ANSWER 19 OF 33 USPATFULL on STN
       2005:171309 USPATFULL <<LOGINID::20090326>>
ΑN
       Kluyveromyces strains metabolizing cellulosic and hemicellulosic
ΤI
       materials
ΙN
       Levine, Robert Paul, Carmel Valley, CA, UNITED STATES
       Enogen, Inc., Salinas, CA, UNITED STATES (U.S. corporation)
PA
PΙ
       US 20050148056
                          A1 20050707
       US 7344876
                           B2 20080318
       US 2004-759785
                               20040116 (10)
ΑI
                           A1
                           20030124 (60)
PRAI
       US 2003-442455P
DТ
       Utility
FS
       APPLICATION
       TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
LREP
       FLOOR, SAN FRANCISCO, CA, 94111-3834, US
       Number of Claims: 30
CLMN
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Page(s)
LN.CNT 1145
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       This invention relates to the use of microorganisms for the generation
```

This invention relates to the use of microorganisms for the generation of ethanol from lignocellulosic waste materials. Yeast strains of the genus Kluyveromyces which have the capability to ferment cellulose, hexose sugars to ethanol are provided. Also provided are methods for converting cellulose, hexoses, or mixed hydrolysates of hexoses to ethanol by fermentation with Kluyveromyces strains. The invention also provides methods to isolate yeast strains which metabolize cellulose, pentoses, or hemicelluloses from waste materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L12 ANSWER 20 OF 33 USPATFULL on STN
       2004:120567 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Mehtod for the modification of polymeric carbohydrate materials
       Teeri, Tuula Tellervo, Taby, SWEDEN
ΙN
       Brumer III, Harry, Johanneshov, SWEDEN
PΙ
       US 20040091977
                           A1 20040513
       US 2003-380907
                           A1 20031009 (10)
ΑТ
       WO 2002-IB4567
                               20021016
       SE 2001-3446
                           20011016
PRAI
       SE 2001-3447
                           20011016
       SE 2002-2310
                           20020723
      Utility
DT
FS
      APPLICATION
      FOLEY AND LARDNER, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007
```

CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN 11 Drawing Page(s)

LN.CNT 1897

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention makes available a method to introduce specific chemical groups onto the surface of any polymeric carbohydrate material to alter the physico-chemical properties of said material. In particular, the method comprises the controlled introduction of chemically-modified oligosaccharides into a carbohydrate polymer using a transglycosylating enzyme.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 21 OF 33 USPATFULL on STN

AN 2003:120114 USPATFULL <<LOGINID::20090326>>

 ${\tt TI}$ Nucleic acids of aspergillus fumigatus encoding industrial enzymes and methods of use

IN Jiang, Bo, Montreal, CANADA

Storms, Reginald, Beaconsfield, CANADA

Roemer, Terry, Montreal, CANADA

Bussey, Howard, Westmount, CANADA

PI US 20030082595 A1 20030501 AI US 2002-213990 A1 20020805 (10)

PRAI US 2001-309870P 20010803 (60)

DT Utility

FS APPLICATION

LREP PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711

CLMN Number of Claims: 45 ECL Exemplary Claim: 1 DRWN 2 Drawing Page(s)

LN.CNT 8033

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides nucleotide sequences of Aspegillus fumigatus that encode proteins which exhibit enzyme activities. Vectors, expression constructs, and host cells comprising the nucleotide sequences of the enzyme genes are also provided. The invention further provides methods for producing the enzymes, and methods for modifying the enzymes in order to improve their desirable characteristics. The activities displayed by the enzymes of the invention include those of a tannase, cellulase, glucose oxidase, glucoamylase, phytase, β -galactosidases, invertase, lipase, α -amylase, laccase, polygalacturonase or xylanase. The enzymes of the invention can be used in a variety of industrial processes. Enzymatically active compositions in various forms as well as antibodies to the enzymes and fragments thereof, are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 22 OF 33 USPATFULL on STN

AN 2003:93549 USPATFULL <<LOGINID::20090326>>

TI Laundry detergent and/or fabric care compositions comprising a transferase

IN Barnabas, Mary Vjayarani, West Chester, OH, UNITED STATES Baeck, Andre Cesar, Bonheiden, BELGIUM Showell, Michael Stanford, Cincinnati, OH, UNITED STATES Smets, Johan, Lubbeek, BELGIUM Convents, Andre Christian, Cincinnati, OH, UNITED STATES

Hubesch, Bruno Albert Jean, Neerijse, BELGIUM Vermote, Christian Leo Marie, Destelbergen, BELGIUM

PA The Procter & Gamble Company, Cincinnati, OH, UNITED STATES, 45224 (U.S.

corporation) A1 20030403 US 20030064909 РΤ A1 20020611 (10) ΑТ US 2002-166906 Continuation of Ser. No. US 2000-674230, filed on 27 Oct 2000, ABANDONED RLI A 371 of International Ser. No. WO 1998-US8629, filed on 29 Apr 1998, UNKNOWN DTUtility FS APPLICATION THE PROCTER & GAMBLE COMPANY, INTELLECTUAL PROPERTY DIVISION, WINTON LREP HILL TECHNICAL CENTER - BOX 161, 6110 CENTER HILL AVENUE, CINCINNATI, OH, 45224 Number of Claims: 29 CLMN ECL Exemplary Claim: 1 DRWN No Drawings LN.CNT 2421 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to laundry detergent and/or fabric care compositions comprising a transferase, preferably an alkaline transferase, wherein when said transferase is a xyloglucan transferase, said xyloglucan transferase exhibits greater transferase activity than hydrolytic activity and/or exhibits higher reaction rates for donor substrates with higher molecular weight than for donor substrates with lower molecular weight. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L12 ANSWER 23 OF 33 USPATFULL on STN ΑN ΤI Laundry detergent and/or fabric care compositions comprising a modified transferase Smets, Johan, Lubbeek, BELGIUM TNBarnabas, Mary Vijayarani, West Chester, OH, United States Showell, Michael Stanford, Cincinnati, OH, United States Boyer, Stanton Lane, Fairfield, OH, United States Convents, Andre Christian, Cincinnati, OH, United States PAProcter & Gamble Company, Cincinnati, OH, United States (U.S. corporation) PΙ US 6410498 B1 20020625 WO 9957254 19991111 US 2000-674472 20001111 (9) ΑТ WO 1999-US9480 19990430 20001101 PCT 371 date DT Utility FS GRANTED EXNAM Primary Examiner: Douyon, Lorna M.; Assistant Examiner: Elhilo, Eisa Cook, C. Brant, Zerby, Kim W., Miller, Steve W. Number of Claims: 38 CLMN ECL Exemplary Claim: 1 0 Drawing Figure(s); 0 Drawing Page(s) DRWN LN.CNT 3228 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to a modified enzyme which AΒ comprises a catalytically active amino acid sequence of a transferase linked to an amino acid sequence comprising a Cellulose Binding Domain (CBD). The present invention further relates to laundry

detergent and/or fabric care compositions comprising such modified

enzyme, for improved fabric care and cleaning benefits.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 24 OF 33 USPATFULL on STN

```
2001:36957 USPATFULL <<LOGINID::20090326>>
ΑN
ΤТ
       Polypeptide with reduced respiratory allergenicity
       Olsen, Arne Agerlin, Virum, Denmark
TN
       Hansen, Lars Bo, Herlev, Denmark
       Beck, Thomas Christian, Birker.o slashed.d, Denmark
       Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PA
PΙ
       US 6201110
                           B1 20010313
ΑI
       US 2000-610751
                               20000706 (9)
       Continuation of Ser. No. US 1999-405311, filed on 20 Sep 1999, now
RLI
       patented, Pat. No. US 6114509 Continuation of Ser. No. US 1998-150891,
       filed on 10 Sep 1998, now patented, Pat. No. US 5981718 Continuation of
       Ser. No. US 1997-836293, filed on 12 May 1997, now patented, Pat. No. US
       5856451 Continuation of Ser. No. WO 1994-DK9500497, filed on 7 Dec 1994
PRAI
       DK 1994-1395
                           19941207
       DK 1994-1396
                           19941207
       DK 1994-1397
                           19941207
       DK 1994-1398
                           19941207
       DK 1994-1399
                           19941207
       DK 1994-1400
                           19941207
       DK 1994-1401
                           19941207
DT
       Utility
FS
       Granted
      Primary Examiner: Sayala, Chhaya D.
EXNAM
LREP
       Lambiris, Esq., Elias J.
       Number of Claims: 14
CLMN
       Exemplary Claim: 1
ECL
       5 Drawing Figure(s); 5 Drawing Page(s)
DRWN
LN.CNT 2239
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The invention relates to modified polypeptides with reduced respiratory
       allergenicity comprising a parent polypeptide with a molecular weight
       from between 10 kDa and 100 kDa conjugated to a polymer with a molecular
       weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified
       polypeptide are produced using a process including the step of
       conjugating from 1 to 30 polymer molecules with the parent polypeptide.
       Further the invention relates to compositions comprising said
       polypeptides and further ingredients normally used in e.g. detergents,
       including dishwashing detergents and soap bars, household article,
       agrochemicals, personal care products, cosmetics, toiletries, oral and
       dermal pharmaceuticals, composition for treating textiles, and
       compositions used for manufacturing food and feed. Finally the invention
       is directed to uses of polypeptides with reduced allergenicity or
       compositions thereof for reducing the allergenicity of products for a
       vast number of industrial applications.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 25 OF 33 USPATFULL on STN
       2000:117890 USPATFULL <<LOGINID::20090326>>
ΑN
ΤI
       Polypeptide with reduced allergenicity
ΙN
       Olsen, Arne Agerlin, Virum, Denmark
       Hansen, Lars Bo, Herlev, Denmark
       Beck, Thomas Christian, Birker.o slashed.d, Denmark
       Novo Nordisk A/S, Bagsvard, Denmark (non-U.S. corporation)
PA
PΙ
       US 6114509
                               20000905
ΑI
       US 1999-405311
                               19990920 (9)
RLI
       Continuation of Ser. No. US 1998-150891, filed on 10 Sep 1998, now
       patented, Pat. No. US 5981718 which is a continuation of Ser. No. US
       1997-836293, filed on 12 May 1997, now patented, Pat. No. US 5856451
       which is a continuation of Ser. No. WO 1995-DK497, filed on 7 Dec 1995
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PRAI

DK 1994-1395

19941207

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DK 1994-1397
                           19941207
       DK 1994-1398
                           19941207
       DK 1994-1399
                           19941207
       DK 1994-1400
                           19941207
       DK 1994-1401
                          19941207
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Sayala, Chhaya D.
       Zelson, Esq., Steve T., Green, Esq., Reza
       Number of Claims: 21
CLMN
       Exemplary Claim: 1
DRWN
       5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2255
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention relates to modified polypeptides with reduced
AR
       allergenicity comprising a parent polypeptide with a molecular weight
       from between 10 kDa and 100 kDa conjugated to a polymer with a molecular
       weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified
       polypeptide are produced using a process including the step of
       conjugating from 1 to 30 polymer molecules with the parent polypeptide.
       Further the invention relates to compositions comprising said
       polypeptides and further ingredients normally used in e.g. detergents,
       including dishwashing detergents and soap bars, household article,
       agrochemicals, personal care products, cosmetics, toiletries, oral and
       dermal pharmaceuticals, composition for treating textiles, and
       compositions used for manufacturing food and feed. Finally the invention
       is directed to uses of polypeptides with reduced allergenicity or
       compositions thereof for reducing the allergenicity of products for a
       vast number of industrial applications.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 26 OF 33 USPATFULL on STN
ΑN
       1999:142125 USPATFULL <<LOGINID::20090326>>
ΤI
       Polypeptide with reduced allergenicity
TN
       Olsen, Arne Agerlin, Virum, Denmark
       Hansen, Lars Bo, Herlev, Denmark
       Beck, Thomas Christian, Birker.o slashed.d, Denmark
PΑ
       Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PΙ
       US 5981718
                               19991109
ΑI
      US 1998-150891
                               19980910 (9)
      Continuation of Ser. No. US 1997-836293, filed on 12 May 1997, now
RLI
      patented, Pat. No. US 5856451 which is a continuation of Ser. No. WO
       1995-DK497, filed on 7 Dec 1995
      DK 1994-1395
PRAI
                          19941207
       DK 1994-1396
                           19941207
       DK 1994-1397
                           19941207
       DK 1994-1398
                           19941207
       DK 1994-1399
                           19941207
       DK 1994-1400
                           19941207
       DK 1994-1401
                           19941207
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Sayala, Chhaya D.
       Zelson, Esq., Steve T., Esq., Reza Green
CLMN
      Number of Claims: 12
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2257
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DK 1994-1396

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

19941207

AΒ The invention relates to modified polypeptides with reduced allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified polypeptide are produced using a process including the step of conjugating from 1 to 30 polymer molecules with the parent polypeptide. Further the invention relates to compositions comprising said polypeptides and fruther ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, composition for treating textiles, and compositions used for manufacturing food and feed. Finally the invention is directed to uses of polypeptides with reduced allergenicity or compositions thereof for reducing the allergenicity of products for a vast number of industrial applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L12 ANSWER 27 OF 33 USPATFULL on STN
       1999:1779 USPATFULL <<LOGINID::20090326>>
ΑN
ΤТ
       Method for reducing respiratory allergenicity
ΙN
       Olsen, Arne Agerlin, Virum, Denmark
       Hansen, Lars Bo, Herlev, Denmark
       Beck, Thomas Christian, Birker.o slashed.d, Denmark
       Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PA
       US 5856451
                               19990105
PΙ
       WO 9617929
                               19960613
ΑI
       US 1997-836293
                               19970512 (8)
       WO 1995-DK497
                               19951207
                               19970512 PCT 371 date
                               19970512 PCT 102(e) date
       DK 1994-1395
                           19941207
PRAI
       DK 1994-1396
                           19941207
       DK 1994-1397
                           19941207
       DK 1994-1398
                           19941207
       DK 1994-1399
                           19941207
       DK 1994-1400
                           19941207
       DK 1994-1401
                           19941207
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Sayala, Chhaya D.
       Zelson, Esq., Steve T., Agris, Esq., Cheryl H.
CLMN
      Number of Claims: 37
ECL
       Exemplary Claim: 1
       5 Drawing Figure(s); 5 Drawing Page(s)
DRWN
LN.CNT 2323
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention relates to modified polypeptides with reduced
AΒ
       allergenicity comprising a parent polypeptide with a molecular weight
       from between 10 kDa and 100 kDa conjugated to a polymer with a molecular
       weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified
       polypeptide are produced using a process including the step of
       conjugating from 1 to 30 polymer molecules with the parent polypeptide.
       Further the invention relates to compositions comprising said
       polypeptides and further ingredients normally used in e.g. detergents,
       including dishwashing detergents and soap bars, household article,
       agrochemicals, personal care products, cosmetics, toiletries, oral and
       dermal pharmaceuticals, composition for treating textiles, and
       compositions used for manufacturing food and feed. Finally the invention
       is directed to uses of polypeptides with reduced allergenicity or
       compositions thereof for reducing the allergenicity of products for a
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vast number of industrial applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

CLMN

Number of Claims: 27

```
L12 ANSWER 28 OF 33 USPATFULL on STN
ΑN
       95:108080 USPATFULL <<LOGINID::20090326>>
TI
       Enzymatic method for synthesis of cellulose 1
ΤN
       Brown, Jr., R. Malcolm, 305 Skyline Dr., Austin, TX, United States
       78746
       Kobayashi, Shiro, 1-8-21, Yaqiyama-minami, Taihaku-ku, Sendai, Miyaqi,
       Kudlicka, Krystyna, 1401 St. Edwards Dr. #148, Austin, TX, United States
       Kuga, Shigenori, 3-4-7 Mizukino, Moriya-machi, Ibaraki-ken, 302-01,
       Japan
       Lee, Jong, 3455 Lake Austin Blvd. #D, Austin, TX, United States 78703
       Li, Likun, 1908 Carroll St., Apt. #1, Houston, TX, United States 77030
       Okuda, Kazuo, 10-41 Ozu-cho #424, Kochi 780, Japan
       Shoda, Shin-Ichiro, 4-7-25-601, Chuo, Aoba-ku, Sendai, Miyagi, Japan
       US 5472859
                               19951205
РΤ
ΑI
       US 1993-100868
                               19930802 (8)
DT
       Utility
FS
       Granted
      Primary Examiner: Knode, Marian C.; Assistant Examiner: Prosts,
EXNAM
       Francisco C.
      Arnold, White & Durkee
LREP
      Number of Claims: 4
CLMN
ECL
       Exemplary Claim: 1
DRWN
       16 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 1479
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention discloses a method of synthesizing a novel form of
       cellulose I as well as methods of synthesizing a novel form of
       cellulose I in vitro. One method comprises contacting an
       activated saccharide substrate with an endoglucanase in an appropriate
       organic solvent/buffer ratio. The invention also encompasses a partially
       purified endoglucanase and a method of synthesizing
       cellooligosaccharides. A second method comprises contacting a nucleotide
       sugar with a purified glycosyl transferase in an appropriate buffer
       medium to insure polymerization and crystallization of parallel
       glucan chains from the enzyme/micelle complex to form
       cellulose I.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 29 OF 33 USPAT2 on STN
       2006:5819 USPAT2 <<LOGINID::20090326>>
ΑN
ΤI
       Polypeptides having cellulolytic enhancing activity and polynucleotides
       encoding same
       Dotson, William D., Plainsboro, NJ, UNITED STATES
IN
       Greenier, Jennifer, Vacaville, CA, UNITED STATES
       Ding, Hanshu, Davis, CA, UNITED STATES
       Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PΑ
PΙ
       US 7271244
                           B2 20070918
       US 2005-51670
                               20050204 (11)
ΑТ
       US 2004-542614P
                           20040206 (60)
PRAI
DT
       Utility
FS
       GRANTED
EXNAM Primary Examiner: Rao, Manjunath
      Starnes, Robert L.
LREP
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5 Drawing Figure(s); 5 Drawing Page(s) LN.CNT 3640 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to isolated polypeptides having AB cellulolytic enhancing activity and isolated nucleic acids encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acids as well as methods for producing and using the polypeptides. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L12 ANSWER 30 OF 33 USPAT2 on STN ΑN ΤI Methods for degrading or converting plant cell wall polysaccharides ΙN Berka, Randy, Davis, CA, UNITED STATES Cherry, Joel, Davis, CA, UNITED STATES Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation) PΑ PΙ US 7413882 B2 20080819 US 2005-78921 ΑI 20050310 (11) PRAI US 2004-556779P 20040325 (60) DTUtility FS GRANTED EXNAM Primary Examiner: Prouty, Rebecca E.; Assistant Examiner: Raghu, Ganapathirama Stames, Robert L. LREP Number of Claims: 9 CLMN ECL Exemplary Claim: 1 DRWN 17 Drawing Figure(s); 17 Drawing Page(s) LN.CNT 3130 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ The present invention relates to methods for converting plant cell wall polysaccharides into one or more products, comprising: treating the plant cell wall polysaccharides with an effective amount of a spent whole fermentation broth of a recombinant microorganism, wherein the recombinant microorganism expresses one or more heterologous genes encoding enzymes which degrade or convert the plant cell wall polysaccharides into the one or more products. The present invention also relates to methods for producing an organic substance, comprising: (a) saccharifying plant cell wall polysaccharides with an effective amount of a spent whole fermentation broth of a recombinant microorganism, wherein the recombinant microorganism expresses one or more heterologous genes encoding enzymes which degrade or convert the plant cell wall polysaccharides into saccharified material; (b) fermenting the saccharified material of step (a) with one or more fermenting microoganisms; and (c) recovering the organic substance from the fermentation. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L12 ANSWER 31 OF 33 USPAT2 on STN 2005:221001 USPAT2 <<LOGINID::20090326>> ΑN ΤI Polypeptide from a cellulolytic fungus having cellulolytic enhancing activity Brown, Kimberly, Elk Grove, CA, UNITED STATES TNHarris, Paul, Carnation, WA, UNITED STATES Zaretsky, Elizabeth, Reno, NV, UNITED STATES Re, Edward, Davis, CA, UNITED STATES Vlasenko, Elena, Davis, CA, UNITED STATES McFarland, Keith, Davis, CA, UNITED STATES Lopez de Leon, Alfredo, Davis, CA, UNITED STATES

ECL

DRWN

Exemplary Claim: 1

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Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PΑ
РΤ
       US 7361495
                          B2 20080422
       US 2005-46124
                               20050128 (11)
ΑТ
       US 2004-540661P
PRAI
                           20040130 (60)
       Utility
DT
FS
       GRANTED
EXNAM Primary Examiner: Prouty, Rebecca; Assistant Examiner: Kosson, Rosanne
LREP
       Starnes, Robert L.
CLMN
      Number of Claims: 16
       Exemplary Claim: 1
       37 Drawing Figure(s); 37 Drawing Page(s)
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to isolated polypeptides having
       cellulolytic enhancing activity and isolated polynucleotides encoding
       the polypeptides. The invention also relates to nucleic acid constructs,
       vectors, and host cells comprising the polynucleotides as well as
       methods for producing and using the polypeptides.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L12 ANSWER 32 OF 33 USPAT2 on STN
ΑN
       2005:189443 USPAT2 <<LOGINID::20090326>>
ΤI
       Methods for degrading lignocellulosic materials
ΙN
       Vlasenko, Elena, Davis, CA, UNITED STATES
       Cherry, Joel, Davis, CA, UNITED STATES
       Xu, Feng, Davis, CA, UNITED STATES
       Novozymes, Inc., Davis, CA, UNITED STATES (U.S. corporation)
PA
PΙ
       US 7354743
                        B2 20080408
                               20050114 (11)
      US 2005-36871
ΑТ
PRAI
      US 2004-537452P
                          20040116 (60)
DT
      Utility
      GRANTED
FS
EXNAM Primary Examiner: Lilling, Herbert J.
LREP
       Starnes, Robert L.
CLMN
      Number of Claims: 13
ECL
      Exemplary Claim: 1
DRWN
       29 Drawing Figure(s); 29 Drawing Page(s)
LN.CNT 2914
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to methods for degrading a lignocellulosic
       material, comprising: treating the lignocellulosic material with an
       effective amount of one or more cellulolytic enzymes in the presence of
       at least one surfactant selected from the group consisting of a
       secondary alcohol ethoxylate, fatty alcohol ethoxylate, nonylphenol
       ethoxylate, tridecyl ethoxylate, and polyoxyethylene ether, wherein the
       presence of the surfactant increases the degradation of lignocellulosic
      material compared to the absence of the surfactant. The present
       invention also relates to methods for producing an organic substance,
       comprising: (a) saccharifying a lignocellulosic material with an
       effective amount of one or more cellulolytic enzymes in the presence of
       at least one surfactant selected from the group consisting of a
       secondary alcohol ethoxylate, fatty alcohol ethoxylate, nonylphenol
       ethoxylate, tridecyl ethoxylate, and polyoxyethylene ether, wherein the
       presence of the surfactant increases the degradation of lignocellulosic
       material compared to the absence of the surfactant; (b) fermenting the
       saccharified lignocellulosic material of step (a) with one or more
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fermentating microoganisms; and (c) recovering the organic substance

from the fermentation.

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L12 ANSWER 33 OF 33 USPAT2 on STN
       2005:171309 USPAT2 <<LOGINID::20090326>>
ΑN
TΙ
      Kluyveromyces strains metabolizing cellulosic and hemicellulosic
      materials
      Levine, Robert Paul, Carmel Valley, CA, UNITED STATES
ΙN
PA
      Phage Biotechnology, Inc., Las Vegas, NV, UNITED STATES (U.S.
       corporation)
PΙ
      US 7344876
                          B2 20080318
      US 2004-759785
                              20040116 (10)
      US 2003-442455P
                          20030124 (60)
      Utility
FS
      GRANTED
EXNAM Primary Examiner: Marx, Irene
      Knobbe, Martens, Olson & Bear, LLP
      Number of Claims: 10
CLMN
      Exemplary Claim: 1
ECL
      7 Drawing Figure(s); 7 Drawing Page(s)
DRWN
LN.CNT 1085
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
      This invention relates to the use of microorganisms for the generation
       of ethanol from lignocellulosic waste materials. Yeast strains of the
       genus Kluyveromyces which have the capability to ferment cellulose,
       hexose sugars to ethanol are provided. Also provided are methods for
       converting cellulose, hexoses, or mixed hydrolysates of hexoses to
       ethanol by fermentation with Kluyveromyces strains. The invention also
      provides methods to isolate yeast strains which metabolize cellulose,
      pentoses, or hemicelluloses from waste materials.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
=> s Obae Kazuhiro/AU
'AU' IS NOT A VALID FIELD CODE
'AU' IS NOT A VALID FIELD CODE
L13
           30 OBAE KAZUHIRO/AU
=> s 113 and (beta(a)glucan)
            1 L13 AND (BETA(A) GLUCAN)
=> dis 114 bib abs
L14 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
ΑN
    143:44035
DN
    Preparation of nonreducing \beta -glucan derivative
ΤТ
    terminated by fructofuranose
    Obae, Kazuhiro; Ibuki, Ichiro; Matsui, Hirokazu; Ito, Hiroyuki;
ΙN
    Watanabe, Kenji
    Asahi Kasei Chemicals Corporation, Japan
PA
SO
    PCT Int. Appl., 24 pp.
    CODEN: PIXXD2
DT
    Patent
    Japanese
LΑ
FAN.CNT 1
                       KIND
    PATENT NO.
                               DATE
                                         APPLICATION NO.
                               _____
                                        WO 2004-JP17562
                              20050609
PΙ
    WO 2005052008
                        A1
                                                                 20041126
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             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
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PRAI JP 2003-398514
                                20031128
                         Α
     WO 2004-JP17562
                          W
                                20041126
     CASREACT 143:44035
OS
GΙ
```

There is provided a β -glucan derivative comprising a AΒ $\boldsymbol{\beta}$ -glucan residue of three or more glucose residues and, chemical bonded to the $\boldsymbol{\beta}$ -glucan residue, a nonreducing sugar residue. These β glucan derivs. do not readily react with active ingredients having terminal amino groups while providing excellent binding property, moldability, and degradability, and are stably formulated as binders for compns. of drugs, agrochems., fertilizers, feeds, food, cosmetics, or industrial chems. Thus, 5% sucrose, 5% cellotriose, and β -Fructofuranosidase of Arthrobacter globiformis were allowed to react at 37° for 20 h to give β -D-fructofuranosyl α -cellotrioside (I). I hardly reacted with L-arginine at 40° and 75% relative humidity for 2 wk and maintained white coloration. (200 mg) was molded under 25 kN pressure to a cylinder mold (8 mm diameter), which exhibited the hardness of 70 N and degradation time of 58 s in pure water at 37°. β -Glucans having glucose residue 40, 220, 500, and 1,064 were similarly transglycosylated to give β -D-fructofuranosyl β -glucans. THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 5

ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L16 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
        AN
DN
        143:44035
ΤI
        Preparation of nonreducing \beta -glucan derivative
        terminated by fructofuranose
IN
        Obae, Kazuhiro; Ibuki, Ichiro; Matsui, Hirokazu; Ito, Hiroyuki;
        Watanabe, Kenji
        Asahi Kasei Chemicals Corporation, Japan
PA
SO
        PCT Int. Appl., 24 pp.
        CODEN: PIXXD2
DT
        Patent
LA
        Japanese
FAN.CNT 1
                                                                    APPLICATION NO.
        PATENT NO.
                                       KIND
                                                   DATE
                                                                                                          DATE
                                       ____
        WO 2005052008
                                                   20050609
                                                                    WO 2004-JP17562
                                                                                                          20041126
PΙ
                                        A1
              W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR,
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PRAI JP 2003-398514
                                         Α
                                                   20031128
        WO 2004-JP17562
                                         W
                                                   20041126
OS
        CASREACT 143:44035
GΙ
```

AB There is provided a β -glucan derivative comprising a β -glucan residue of three or more glucose residues and, chemical bonded to the β -glucan residue, a nonreducing sugar residue. These β - glucan derivs. do not readily react with active ingredients having terminal amino groups while providing excellent binding property, moldability, and degradability, and are stably formulated as binders for compns. of drugs, agrochems., fertilizers, feeds, food, cosmetics, or industrial chems. Thus, 5% sucrose, 5% cellotriose, and

```
\alpha\text{-cellotrioside} (I). I hardly reacted with L-arginine at 40\,^{\circ}
     and 75% relative humidity for 2 wk and maintained white coloration. I
     (200 mg) was molded under 25 kN pressure to a cylinder mold (8 mm diameter),
     which exhibited the hardness of 70 N and degradation time of 58 s in pure
     water at 37°. \beta -Glucans having glucose
     residue 40, 220, 500, and 1,064 were similarly transglycosylated to give
     \beta-D-fructofuranosyl \beta -glucans.
RE.CNT 5
              THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
=> s Matsui Hirokazu/AU
'AU' IS NOT A VALID FIELD CODE
'AU' IS NOT A VALID FIELD CODE
          447 MATSUI HIROKAZU/AU
=> s 117 and (beta(a)glucan)
             1 L17 AND (BETA(A) GLUCAN)
=> dis 118 bib abs
L18 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
     143:44035
    Preparation of nonreducing \beta -glucan derivative
     terminated by fructofuranose
     Obae, Kazuhiro; Ibuki, Ichiro; Matsui, Hirokazu; Ito, Hiroyuki;
    Watanabe, Kenji
    Asahi Kasei Chemicals Corporation, Japan
    PCT Int. Appl., 24 pp.
    CODEN: PIXXD2
    Patent
     Japanese
FAN.CNT 1
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                       KIND DATE
    PATENT NO.
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     WO 2005052008
                        A1 20050609 WO 2004-JP17562
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             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
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PRAI JP 2003-398514
                         Α
                               20031128
     WO 2004-JP17562
                         W
                               20041126
     CASREACT 143:44035
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 β -Fructofuranosidase of Arthrobacter globiformis were allowed to

react at 37° for 20 h to give β -D-fructofuranosyl

T.18

ΤI

ΙN

PASO

DT

LA

OS GΙ

AB There is provided a $\boldsymbol{\beta}$ -glucan derivative comprising a $\boldsymbol{\beta}$ -glucan residue of three or more glucose residues and, chemical bonded to the $\boldsymbol{\beta}$ -glucan residue, a nonreducing sugar residue. These β glucan derivs. do not readily react with active ingredients having terminal amino groups while providing excellent binding property, moldability, and degradability, and are stably formulated as binders for compns. of drugs, agrochems., fertilizers, feeds, food, cosmetics, or industrial chems. Thus, 5% sucrose, 5% cellotriose, and β -Fructofuranosidase of Arthrobacter globiformis were allowed to react at 37° for 20 h to give β -D-fructofuranosyl $\alpha\text{-cellotrioside}$ (I). I hardly reacted with L-arginine at $40\,^{\circ}$ and 75% relative humidity for 2 wk and maintained white coloration. I (200 mg) was molded under 25 kN pressure to a cylinder mold (8 mm diameter), which exhibited the hardness of 70 N and degradation time of 58 s in pure water at 37°. β -Glucans having glucose residue 40, 220, 500, and 1,064 were similarly transglycosylated to give β -D-fructofuranosyl β -glucans.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> dis 120 bib abs

L20 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN AN 2005:493635 CAPLUS <<LOGINID::20090326>> DN 143:44035 TI Preparation of nonreducing β -glucan derivative terminated by fructofuranose IN Obae, Kazuhiro; Ibuki, Ichiro; Matsui, Hirokazu; Ito, Hiroyuki; Watanabe, Kenji PA Asahi Kasei Chemicals Corporation, Japan SO PCT Int. Appl., 24 pp.

DT Patent

LA Japanese

CODEN: PIXXD2

FAN.CNT 1

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ΡI	WO 2005052008	A1	20050609	WO 2004-JP17562	20041126		

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            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
             SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
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                                20060816
                                           EP 2004-819431
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                             20031128
PRAI JP 2003-398514
                        А
     WO 2004-JP17562
                         W
                                20041126
     CASREACT 143:44035
OS
GΙ
```

There is provided a β -glucan derivative comprising a AΒ eta -glucan residue of three or more glucose residues and, chemical bonded to the β -glucan residue, a nonreducing sugar residue. These β glucan derivs. do not readily react with active ingredients having terminal amino groups while providing excellent binding property, moldability, and degradability, and are stably formulated as binders for compns. of drugs, agrochems., fertilizers, feeds, food, cosmetics, or industrial chems. Thus, 5% sucrose, 5% cellotriose, and β -Fructofuranosidase of Arthrobacter globiformis were allowed to react at 37° for 20 h to give β -D-fructofuranosyl α -cellotrioside (I). I hardly reacted with L-arginine at 40° and 75% relative humidity for 2 wk and maintained white coloration. (200 mg) was molded under 25 kN pressure to a cylinder mold (8 mm diameter), which exhibited the hardness of $70~\mathrm{N}$ and degradation time of $58~\mathrm{s}$ in pure water at 37°. β -Glucans having glucose residue 40, 220, 500, and 1,064 were similarly transglycosylated to give β -D-fructofuranosyl β -glucans.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> s Watanabe Kenji/AU
'AU' IS NOT A VALID FIELD CODE
'AU' IS NOT A VALID FIELD CODE
L21 3040 WATANABE KENJI/AU
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=> s 121 and (beta(a)glucan)

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=> dis 122 bib abs
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L22 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
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AN 2005:493635 CAPLUS <<LOGINID::20090326>>

DN 143:44035

TI Preparation of nonreducing β -glucan derivative terminated by fructofuranose

IN Obae, Kazuhiro; Ibuki, Ichiro; Matsui, Hirokazu; Ito, Hiroyuki; Watanabe, Kenji

PA Asahi Kasei Chemicals Corporation, Japan

SO PCT Int. Appl., 24 pp. CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

r An.	PATENT NO.					KIND DATE		APPLICATION NO.						DATE				
ΡI	WO 2005052008			A1 20050609		WO 2004-JP17562					20041126							
		W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	AZ,	ΒA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
			CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
			GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KP,	KR,	KΖ,	LC,
			LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NΙ,
			NO,	NΖ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,
			ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UΖ,	VC,	VN,	YU,	ZA,	ZM,	ZW
		RW:	BW,	GH,	GM,	ΚE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑM,
			ΑZ,	BY,	KG,	KΖ,	MD,	RU,	ΤJ,	TM,	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,
			EE,	ES,	FI,	FR,	GB,	GR,	HU,	ΙE,	IS,	ΙΤ,	LU,	MC,	NL,	PL,	PT,	RO,
			SE,	SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,
			ΝE,	SN,	TD,	ΤG												
	EP 1690876			A1 20060816			EP 2004-819431						20041126					
		R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙΤ,	LI,	LU,	ΝL,	SE,	MC,	PT,
			IE,	SI,	FI,	RO,	CY,	TR,	BG,	CZ,	EE,	HU,	PL,	SK,	IS			
PRAI	JΡ	JP 2003-398514			A 20031128													
	WO 2004-JP17562					W		2004	1126									
OS GI	CAS	SREAC	T 14	3:44	035													

AB There is provided a β -glucan derivative comprising a β -glucan residue of three or more glucose residues and, chemical bonded to the β -glucan residue, a nonreducing sugar residue. These β - glucan derivs. do not readily react with active ingredients having terminal amino groups while providing excellent binding property, moldability, and degradability, and are stably formulated as binders for compns. of drugs, agrochems., fertilizers, feeds, food, cosmetics, or

industrial chems. Thus, 5% sucrose, 5% cellotriose, and $\beta\text{-}\text{Fructofuranosidase}$ of Arthrobacter globiformis were allowed to react at 37° for 20 h to give $\beta\text{-}D\text{-}\text{fructofuranosyl}$ $\alpha\text{-}\text{cellotrioside}$ (I). I hardly reacted with L-arginine at 40° and 75% relative humidity for 2 wk and maintained white coloration. I (200 mg) was molded under 25 kN pressure to a cylinder mold (8 mm diameter), which exhibited the hardness of 70 N and degradation time of 58 s in pure water at 37°. β -Glucans having glucose residue 40, 220, 500, and 1,064 were similarly transglycosylated to give $\beta\text{-}D\text{-}\text{fructofuranosyl}$ β -glucans.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> dis hist

(FILE 'HOME' ENTERED AT 15:16:42 ON 26 MAR 2009)

FILE 'MEDLINE, EMBASE, BIOSIS, APOLLIT, BABS, CAPLUS, CBNB, CIN, COMPENDEX, DISSABS, EMA, IFIPAT, NTIS, PASCAL, PROMT, RAPRA, SCISEARCH, TEXTILETECH, USPATFULL, USPATOLD, USPAT2, WPIFV, WPINDEX, WSCA, WTEXTILES' ENTERED AT 15:17:11 ON 26 MAR 2009

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50698 S CELLULOSE (S) ENZYME
L1
           3057 S L1 AND GLUCAN
L2
           1684 S L2 AND (CELLULASE OR FRUTOFURANOSIDASE)
L3
            622 S L3 AND SYNTHESIS
L4
            522 S L4 AND OLIGO?
L5
L6
           106 S L5 AND (NON-REDUCING(A) END)
L7
            31 S L6 AND (GLC OR GAL)
L8
           1684 S L2 AND CELLULASE
L9
           466 S L8 AND OLIGOSACCHARIDES
L10
           135 S L9 AND (NON-REDUCING(A) END)
L11
             2 S L10 AND (GLC AND GAL)
L12
             33 S L10 AND CATALYST
L13
            30 S OBAE KAZUHIRO/AU
L14
              1 S L13 AND (BETA(A)GLUCAN)
L15
           101 S IBUKI ICHIRO/AU
L16
              1 S L15 AND (BETA(A)GLUCAN)
L17
           447 S MATSUI HIROKAZU/AU
L18
              1 S L17 AND (BETA(A)GLUCAN)
L19
           2480 S ITO HIROYUKI/AU
L20
            1 S L19 AND (BETA(A)GLUCAN)
L21
           3040 S WATANABE KENJI/AU
L22
             1 S L21 AND (BETA(A)GLUCAN)
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